Ruthinium®
WE TAKE CARE OF YOUR SMILE

DENTURE GUIDE® METHOD

USER MANUAL
2D Digital Preview and Maestro 3D Dental Studio

Scan the QR Code and watch the **tutorial videos**
on the Denture Guide® Method.

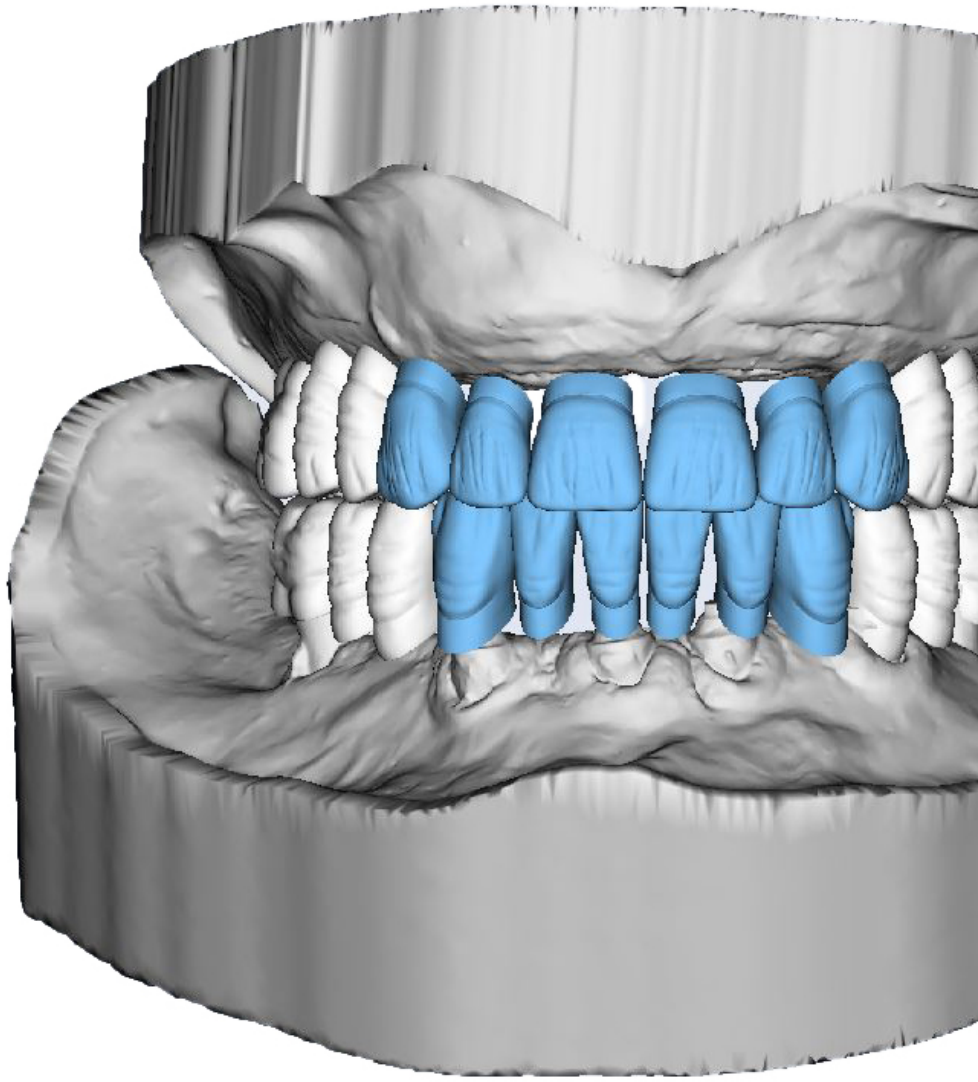
THE RUTHINIUM DIGITAL WORKFLOW!

From Clinical Information Sharing to Final dentures.

Ruthinium Digital workflow has the goal of improving efficiency without disrupting traditional dentist workflow. We recognize the importance of preserving established procedures, but at the same time we want to offer concrete support to optimize the entire process.

The key step in our proposal is the acquisition of data using scanners instead of physical models. This approach allows dentists to overcome the challenge of sending physical data to laboratories by replacing this practice with digital transmission. In this way, we simplify the workflow and reduce the inconvenience of physically transporting materials.

The transition to digital data collection represents a significant advance in modern dentistry, allowing practitioners to focus on their medical skills without having to worry about logistics. With our approach, we aim to facilitate this transition and offer dentists a more efficient and convenient way to manage data and collaborate with laboratories.

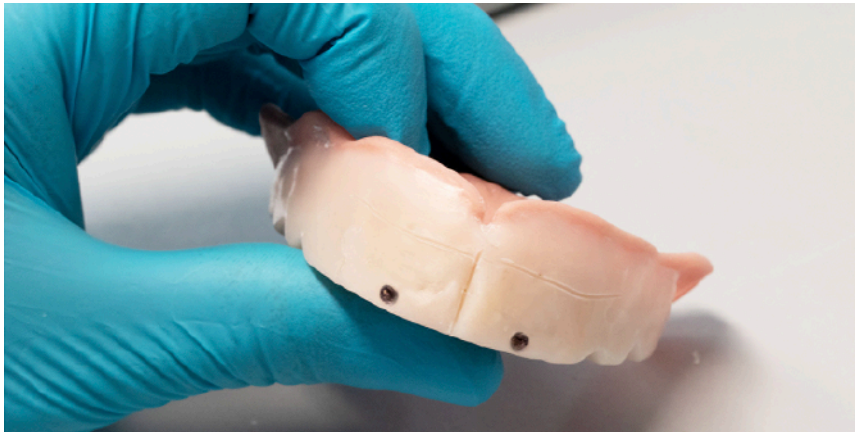


DIGITAL PREVIEW

3D DENTURE GUIDE

BITERIMS REFERENCE

The clinician performs the upper wax rim incision through two reference points using the Denture Guide calibrator.



PHOTOGRAPHIC PROTOCOL

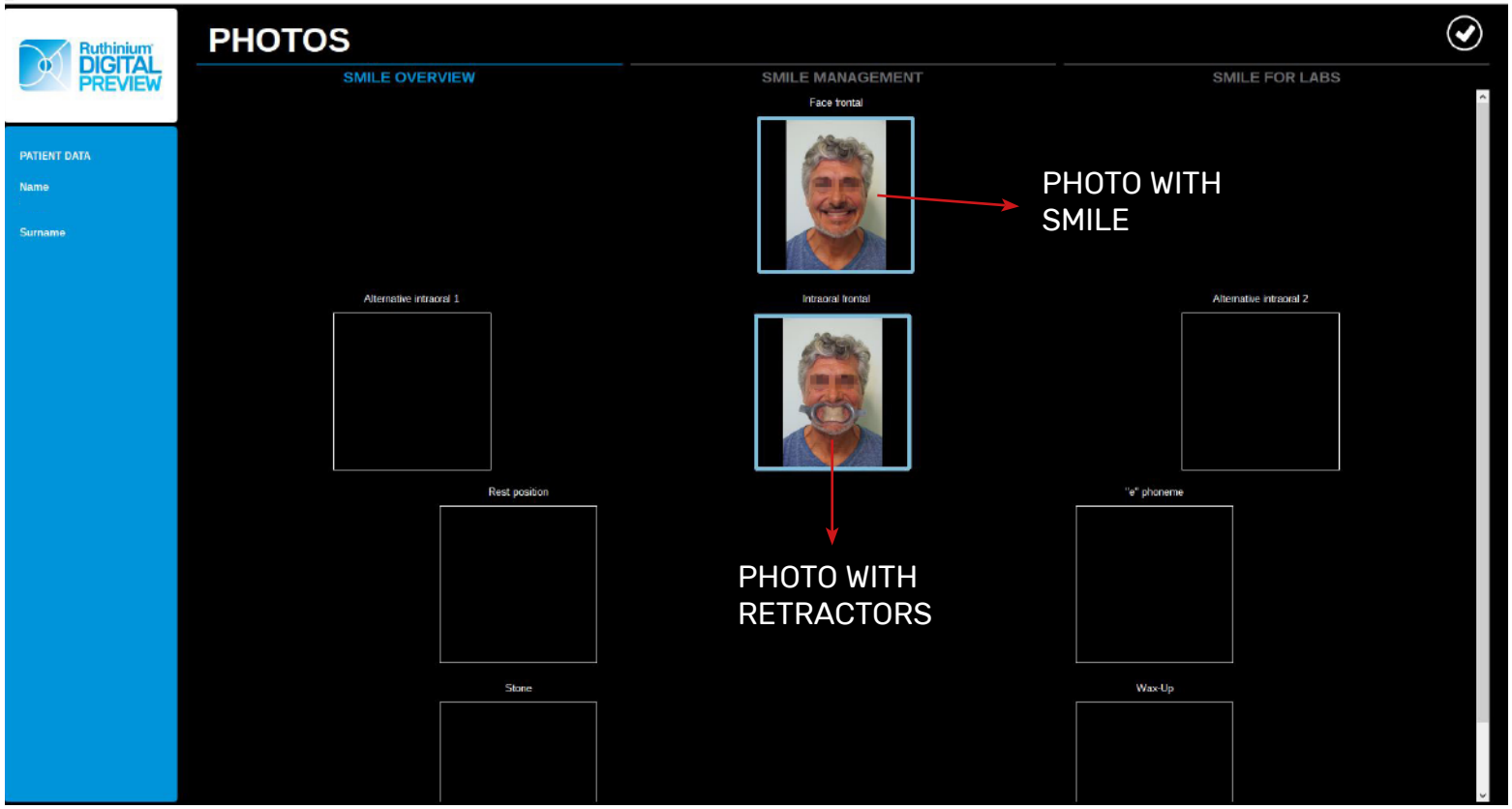
Patient seated with straight back and with support behind the back of the head
Vertical camera or new generation smartphone
Aesthetic level parallel to the horizon
Focus on teeth/center of face

DIGITAL PREVIEW

Photographic previsualization software

1° IMPORTING DATA

Photo with smile and with retractors

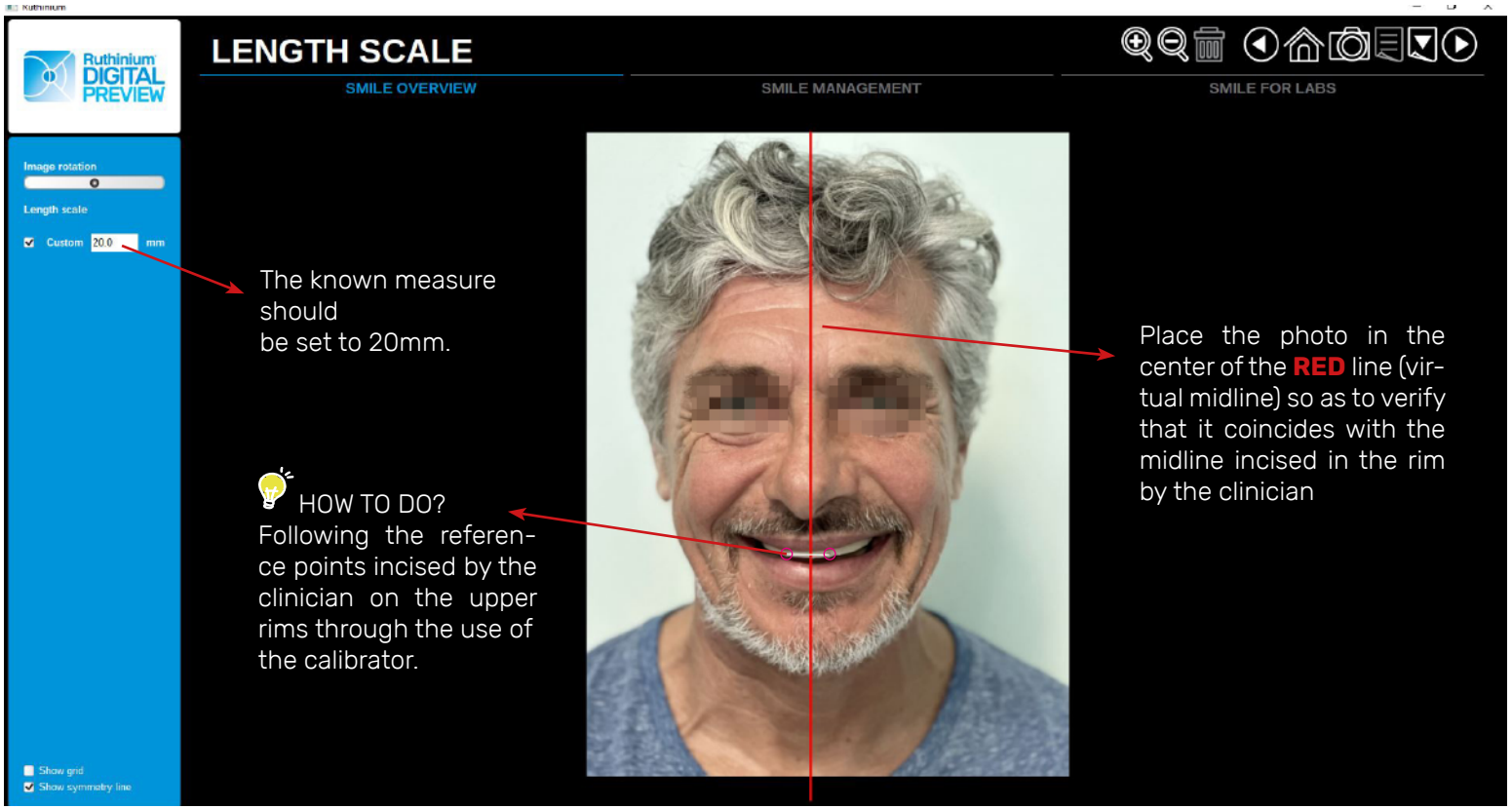


DIGITAL PREVIEW

Photographic previsualization software

2° CALIBRATION

Process of turning photo pixels into actual measurements and to correctly position the midline

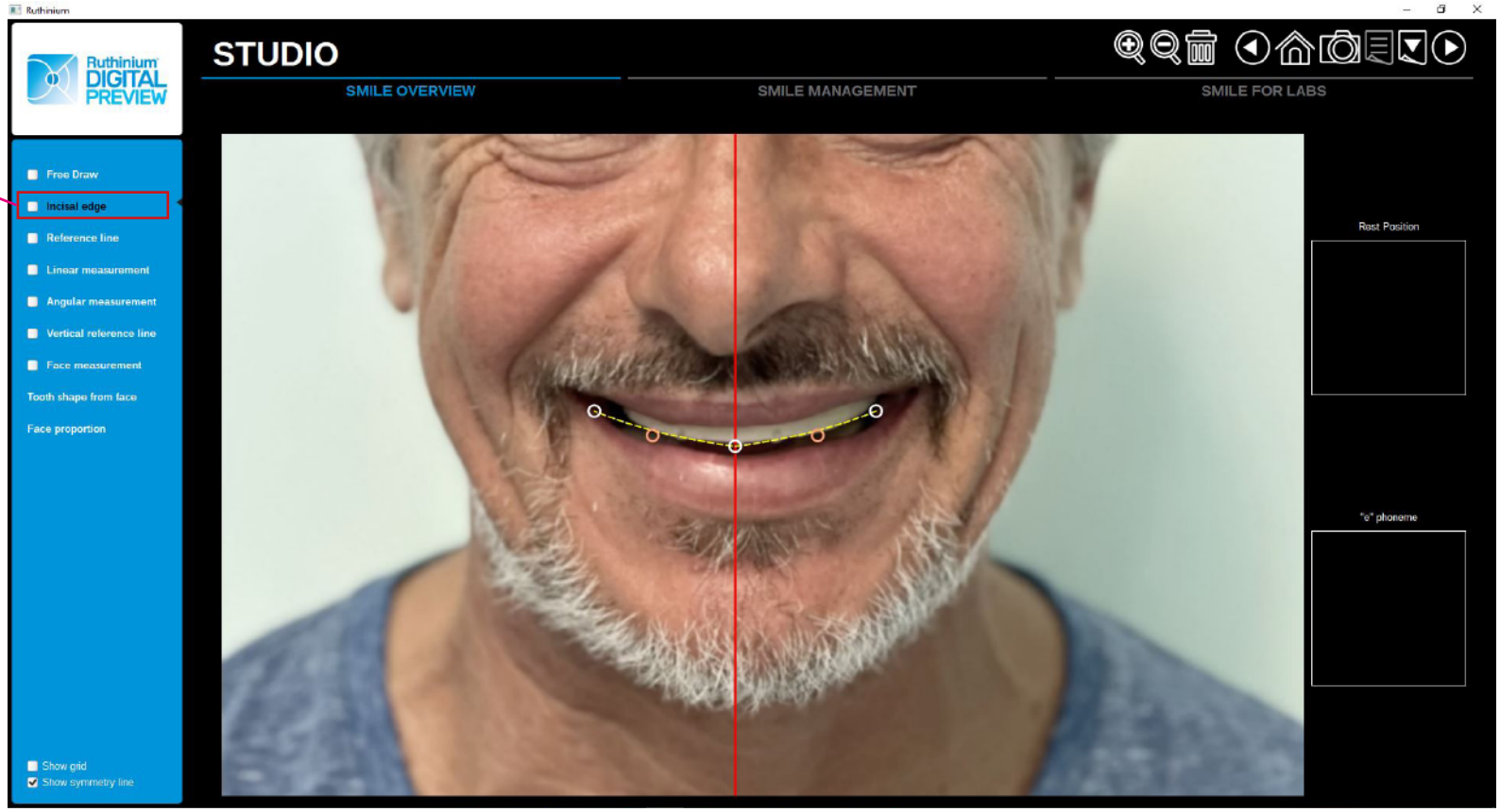


DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Incisal edge
Clicking in the center of the red line near the upper bi-terim will appear a dynamic trace with which you will outline the occlusal plane.

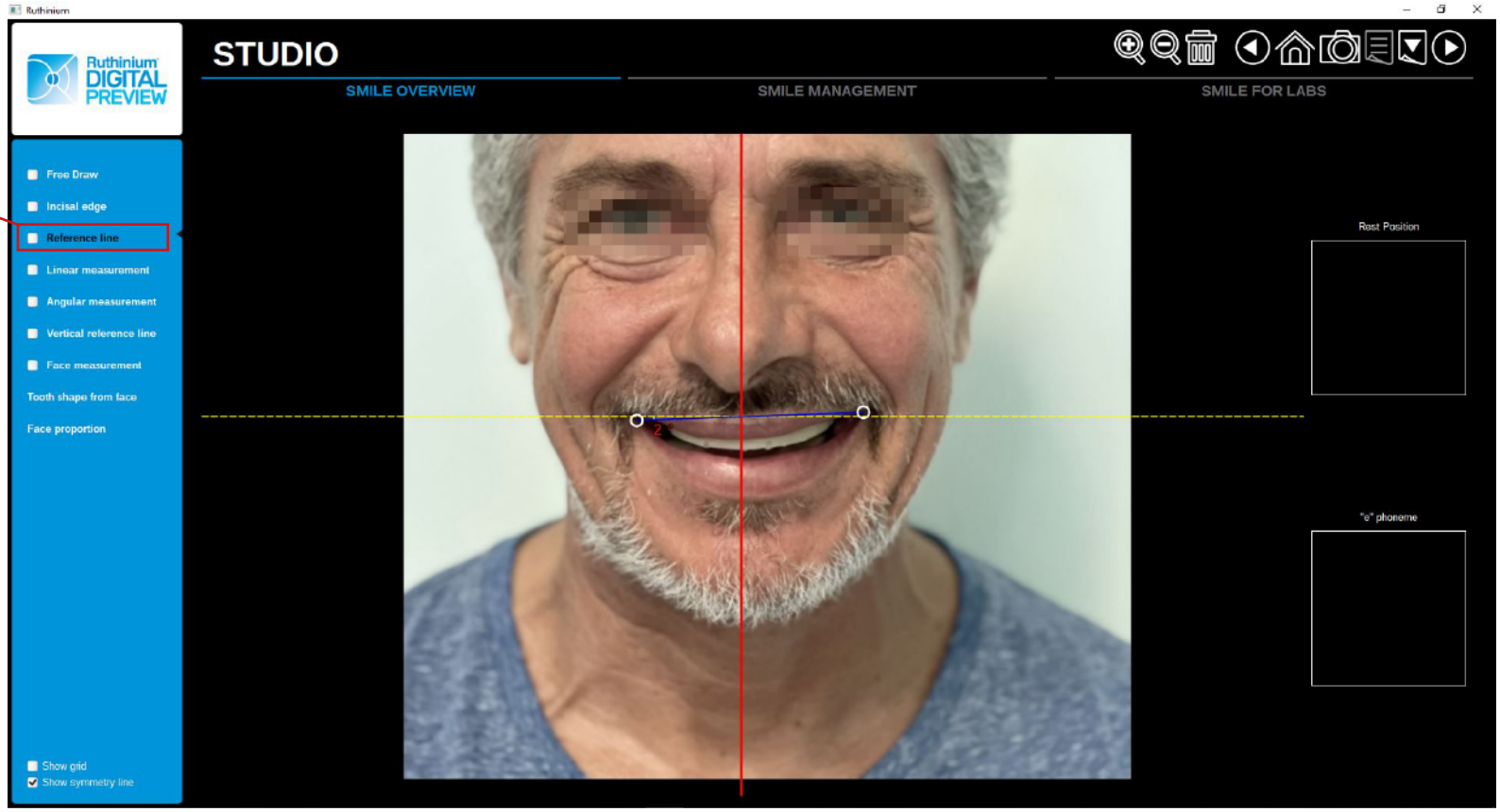
Automatically **two orange dots** will appear with which you can modify the arch.



DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Reference line
Setting two points will generate a line: this tool allows you to calculate the degree of angle between the two points.

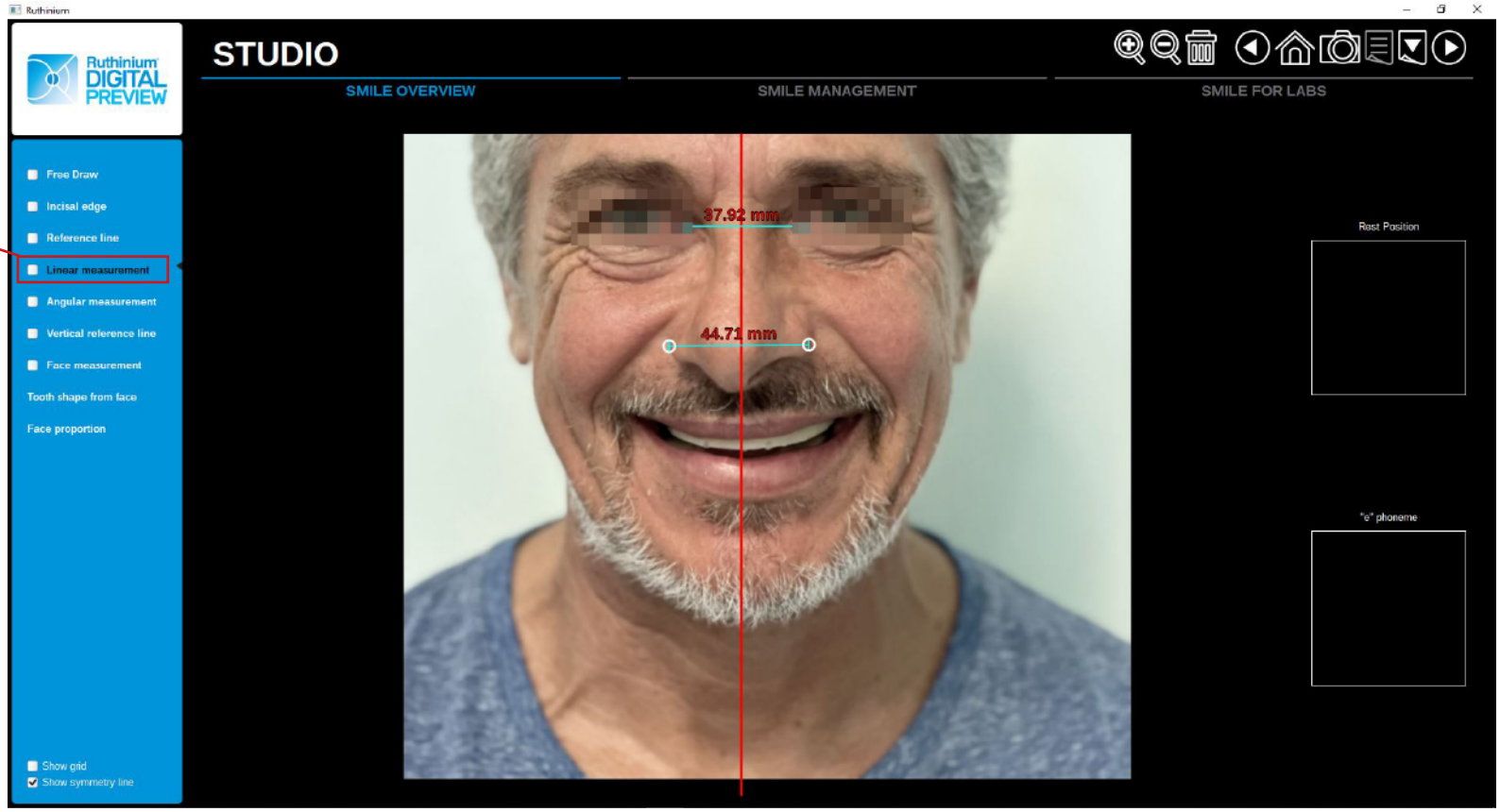


DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Linear Measurement
Instrument to measure a given space dictated by two points.

Useful for checking the distance between canine and canine.

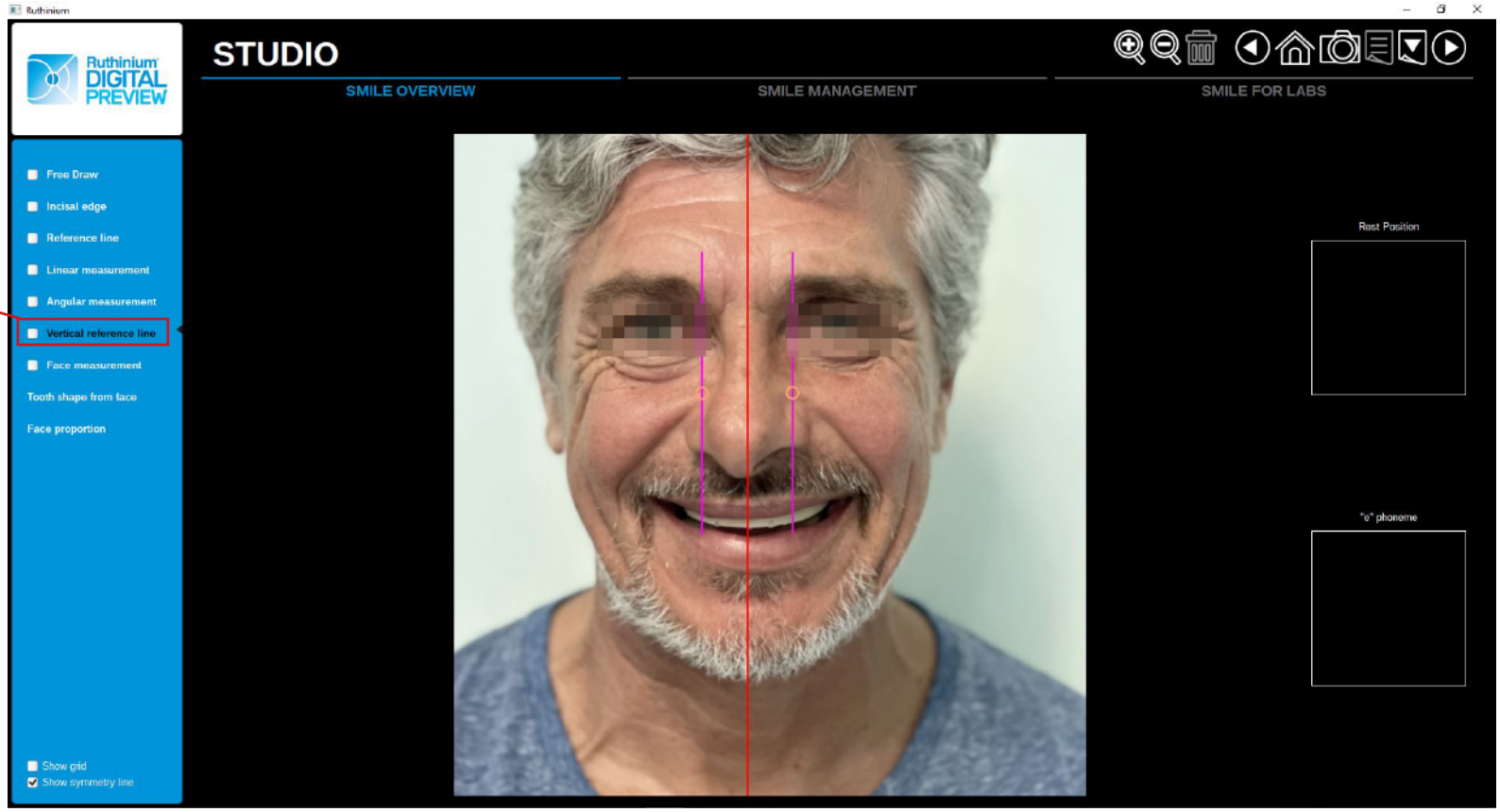


DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Vertical reference line
Tool to create two vertical lines.

Useful for checking the correct position of canines.

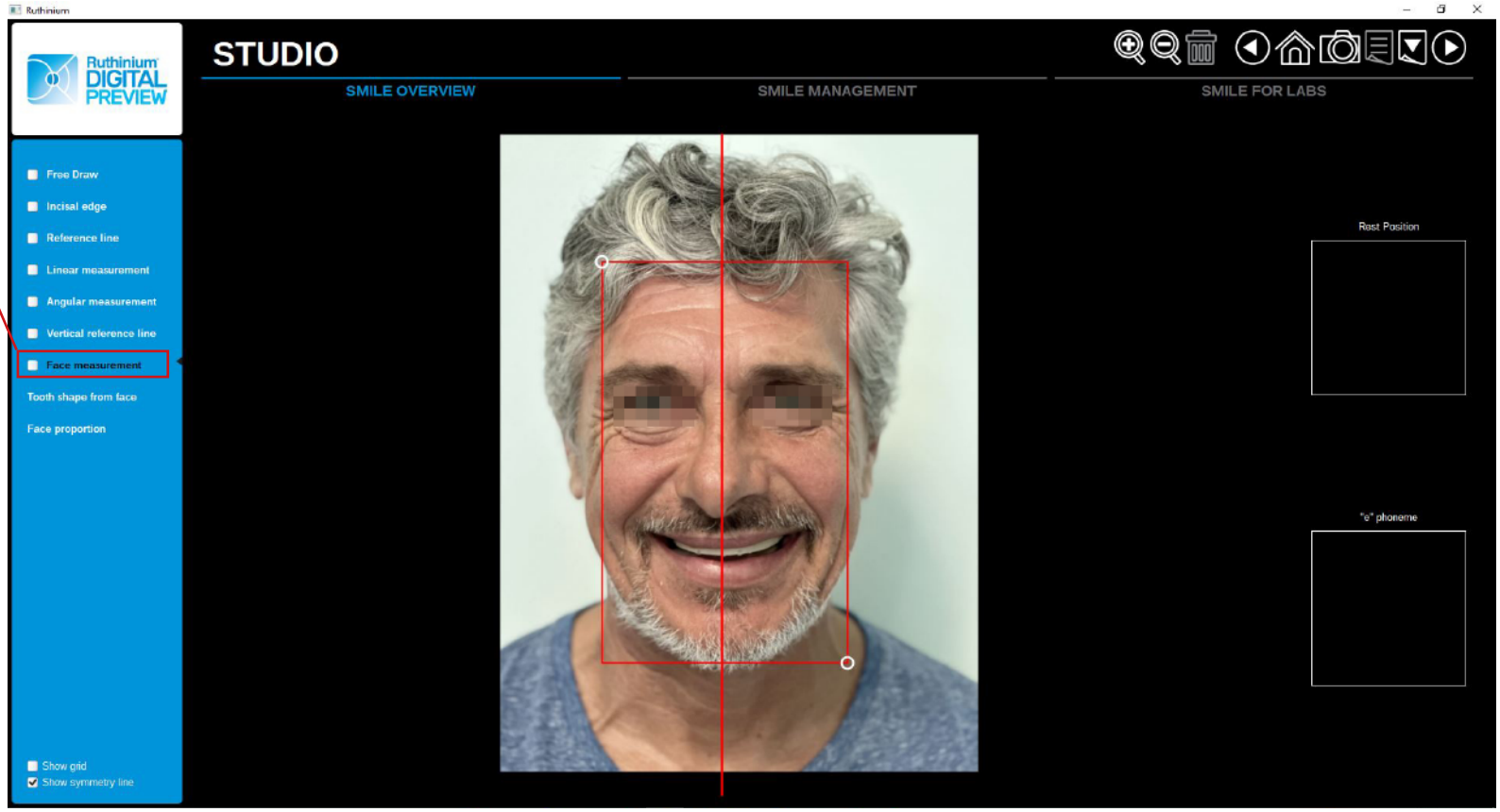


DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Face measurement
Place the **RED** rectangle in the following way: **The upper side** should correspond to the hairline, (with bald patient it should correspond to the first wrinkle of the forehead).**The lower side** should correspond to the base of the chin. **The laterals** must correspond to the end of the cheekbones.

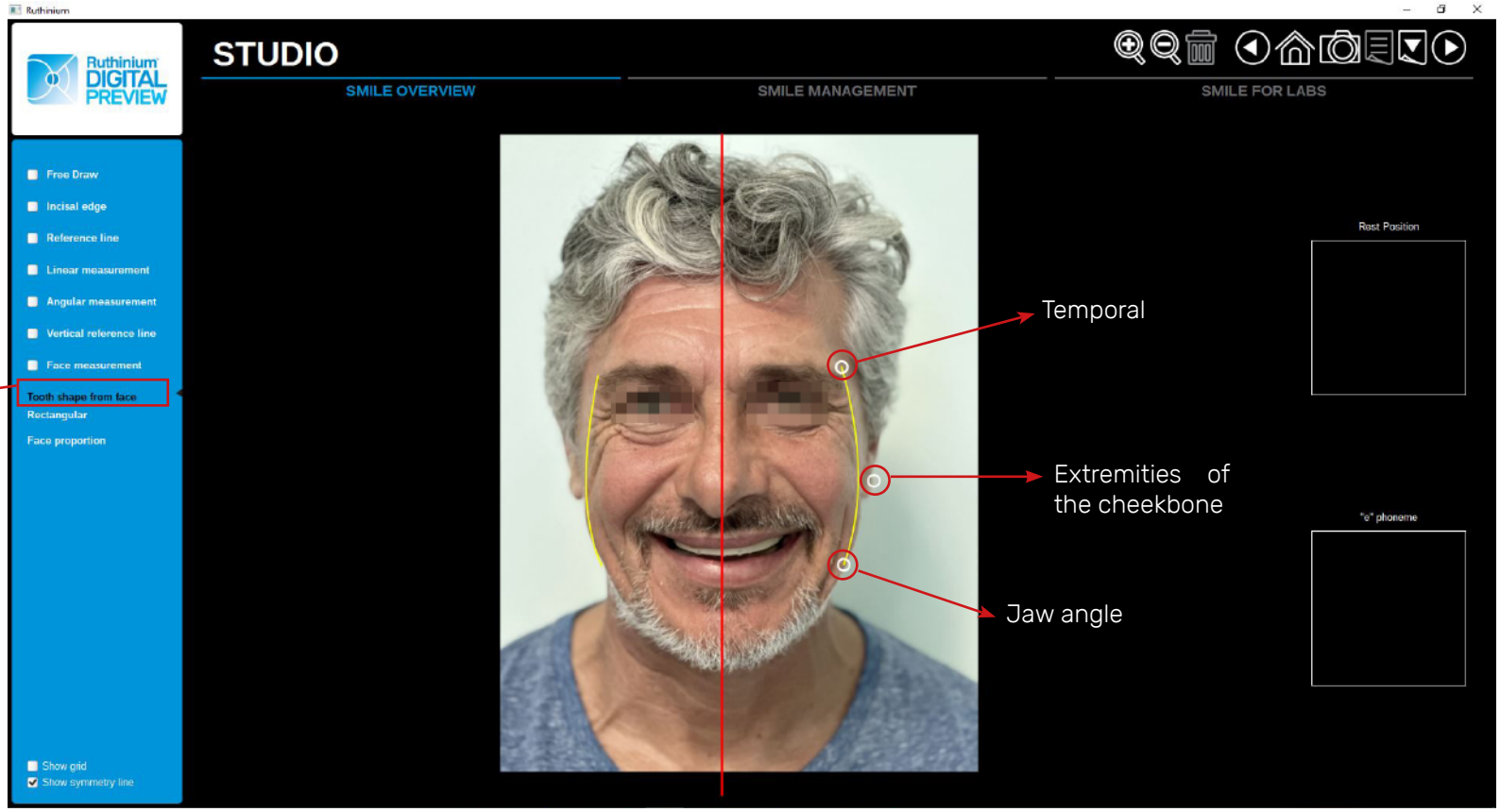
Through these parameters the software will calculate 1/16th of the area to recommend the correct size of the upper central incisors



DIGITAL PREVIEW
Photographic previsualization software

3° FACE ANALYSIS
On the left menu are the following software functions useful as a proper face analysis:

Tooth shape from face
Useful tool for identifying the ideal shape of the upper central incisors (square, triangular, oval).



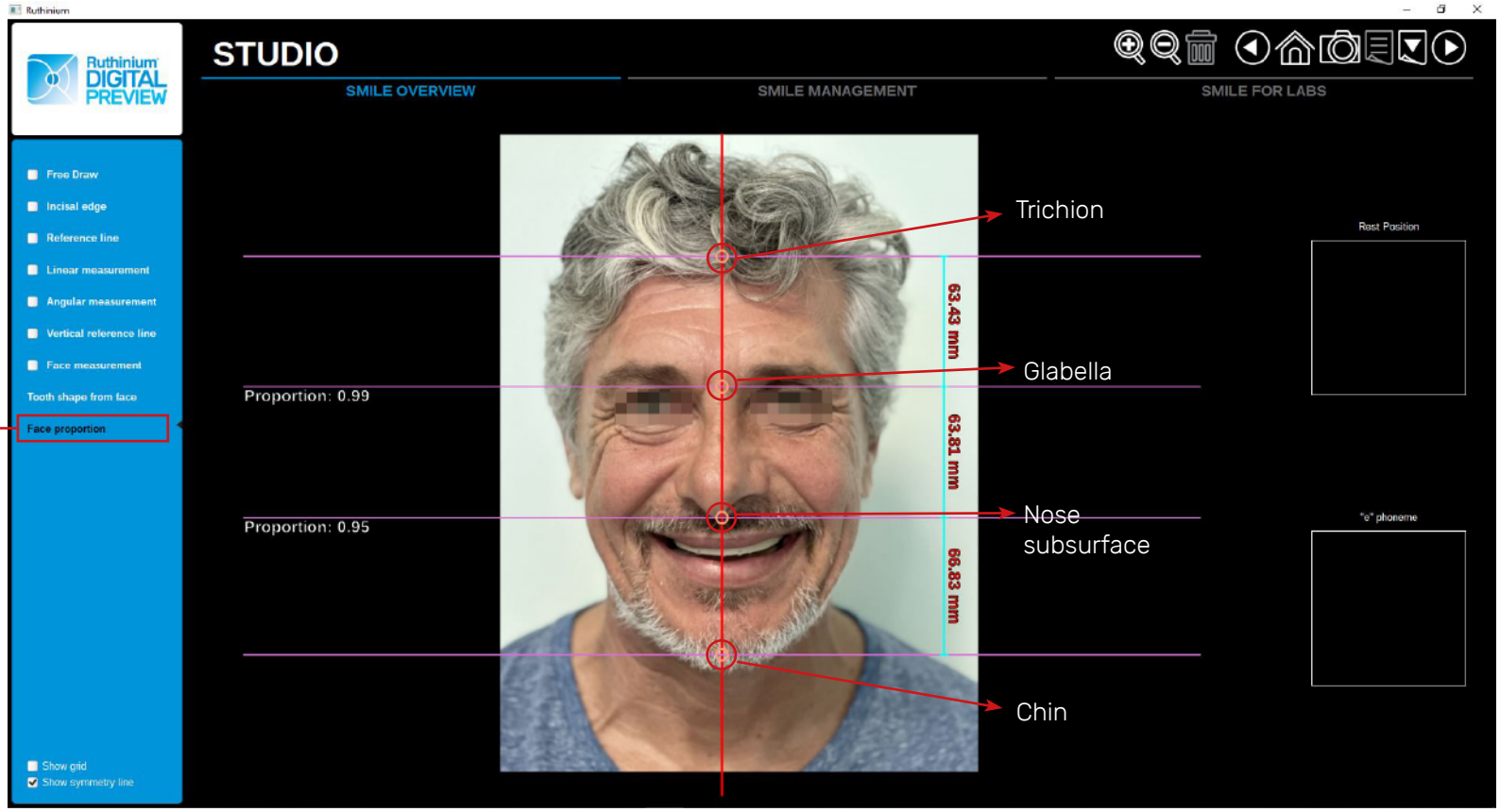
DIGITAL PREVIEW

Photographic previsualization software

3° FACE ANALYSIS

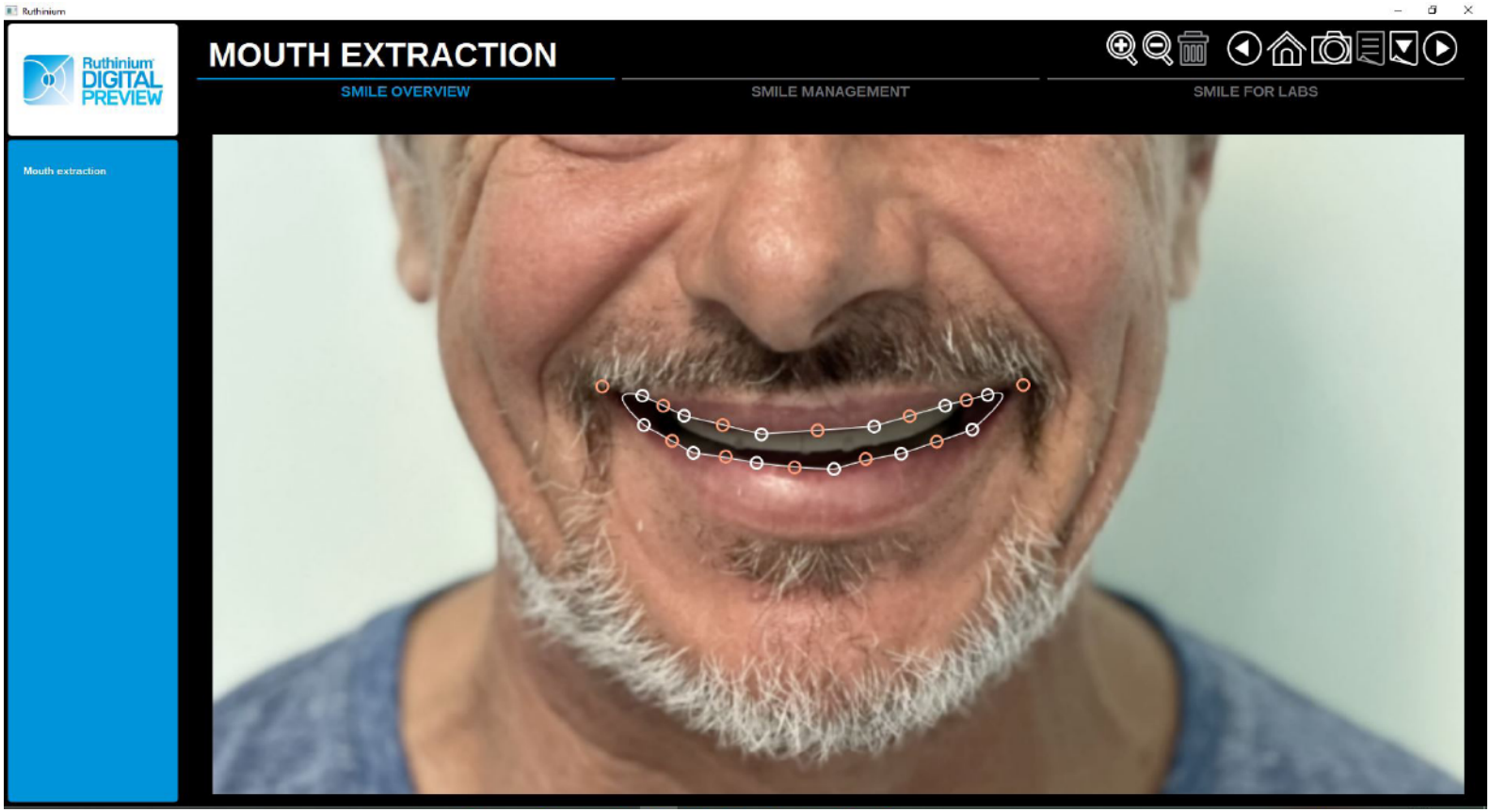
On the left menu are the following software functions useful as a proper face analysis:

Face proportion
Useful tool for face analysis based on face proportions.



DIGITAL PREVIEW
Photographic previsualization software

4° ENDO-ORAL AREA CUTOUT
Cropping the photo

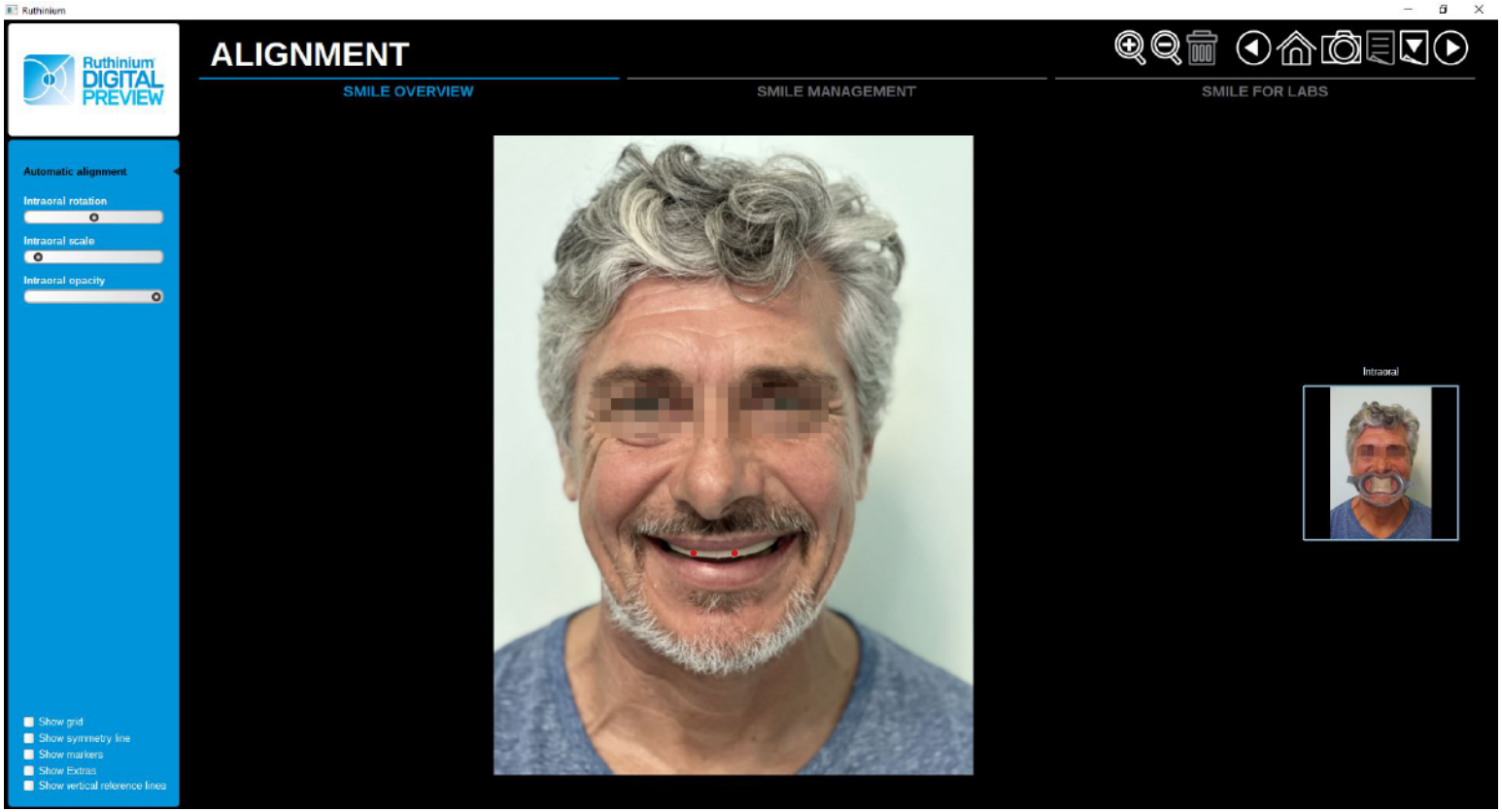


Following the contour of the lips, a cutout of the endo-oral area is created with a series of white dots.

With **ORANGE** dots you can modify the curves and refine the cutout.

DIGITAL PREVIEW
Photographic previsualization software

5° PICTURE ALIGNMENT
Frontal Face with Intraoral Frontal



You have to align the rims through the two reference points that were incised by the clinician.

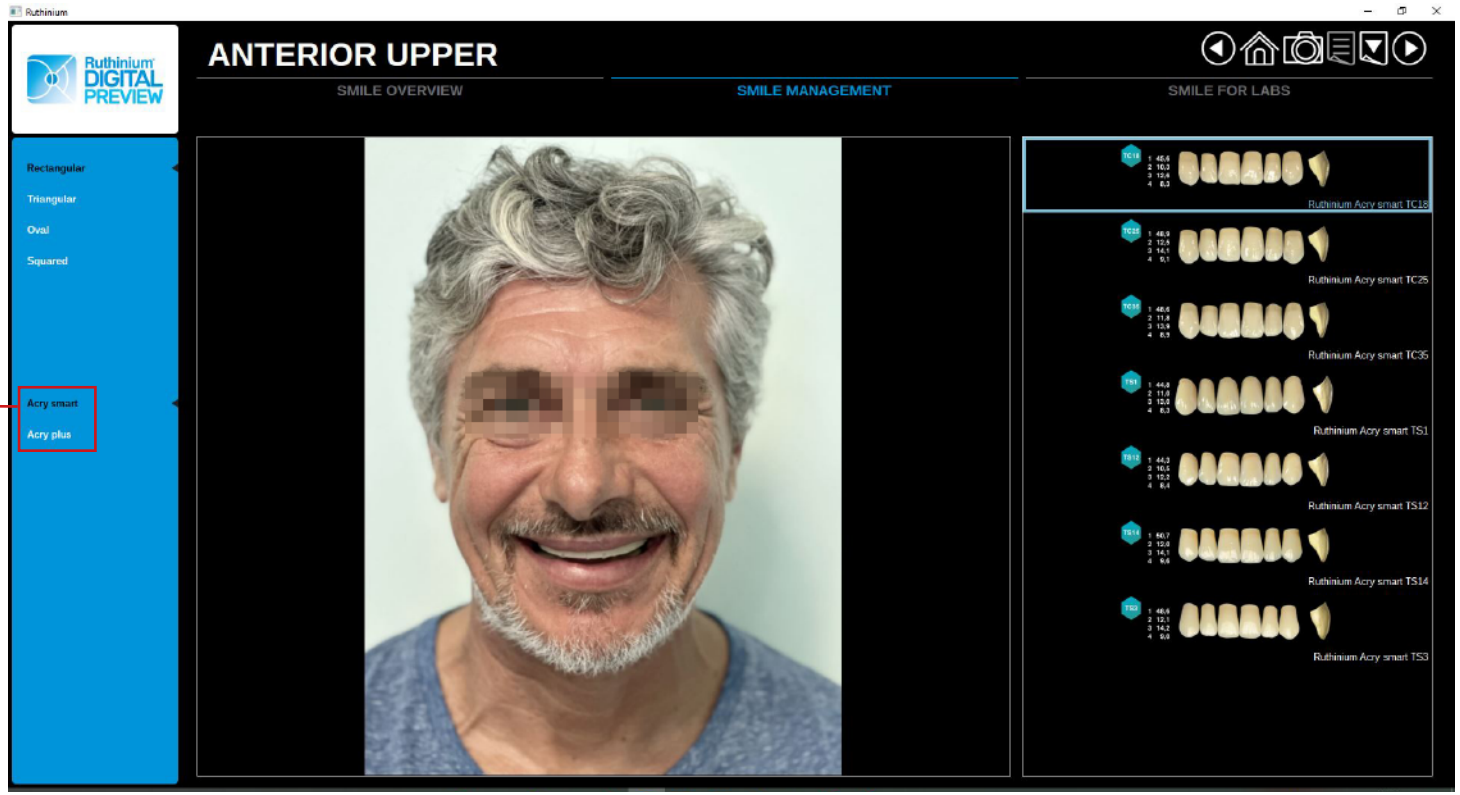
DIGITAL PREVIEW

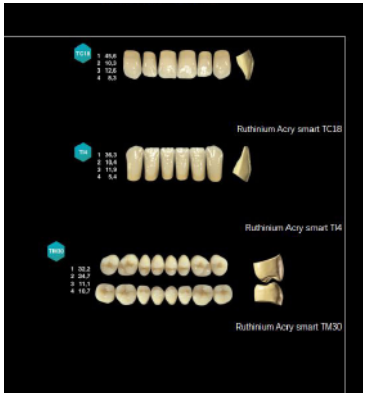
Photographic previsualization software

6° TEETH SETUP

The software opens the library of Ruthinium **Acry Smart** and **Acry Plus** commercial teeth indicating which one is most correct to use based on the information provided previously. The choice of tooth is not constrained, it can be changed manually based on an individual choice criterion.

Choice of the desired Ruthinium library



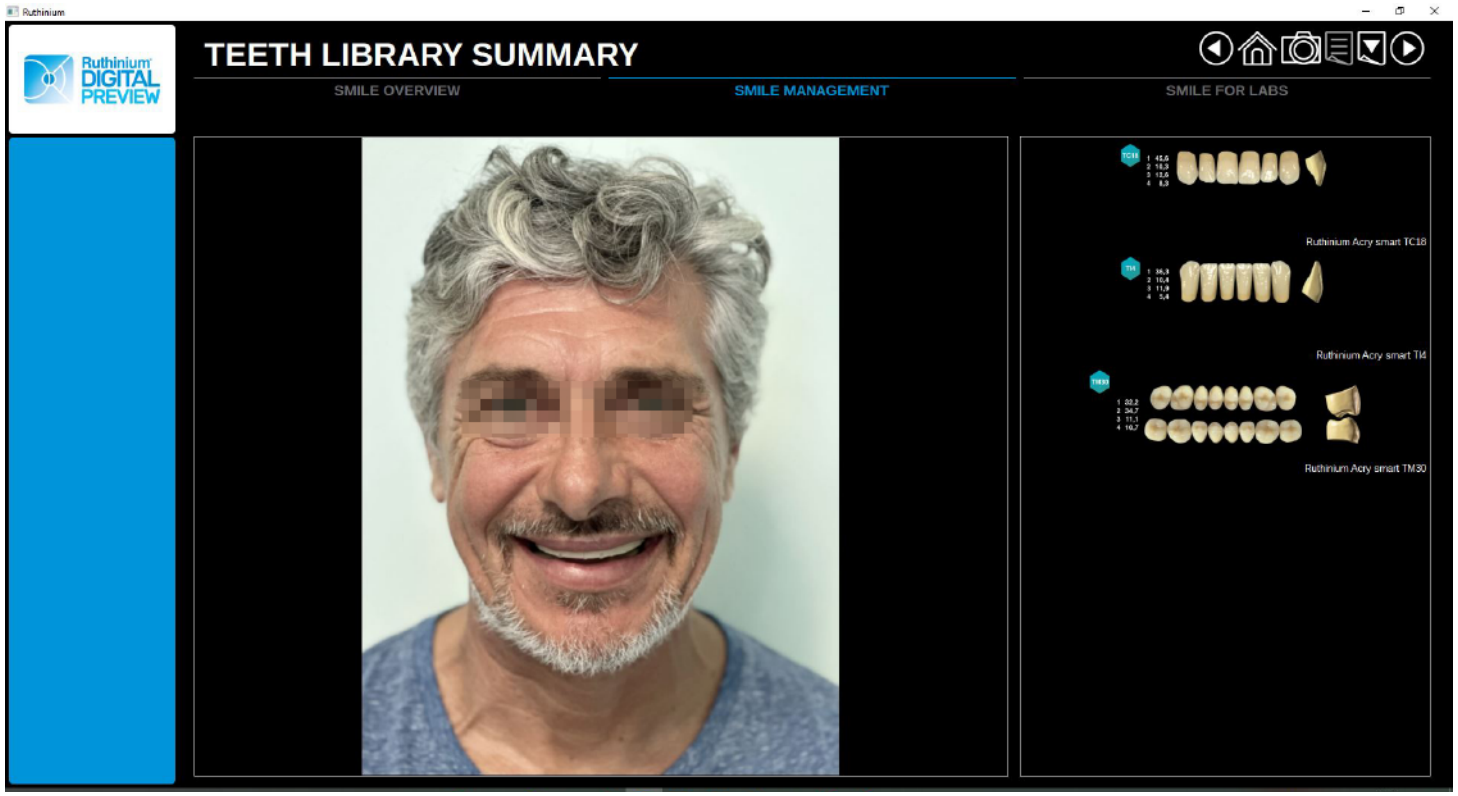


DIGITAL PREVIEW

Photographic previsualization software

6° RECAP TEETH SETUP

The software will indicate the correct articulation



DIGITAL PREVIEW

Photographic previsualization software

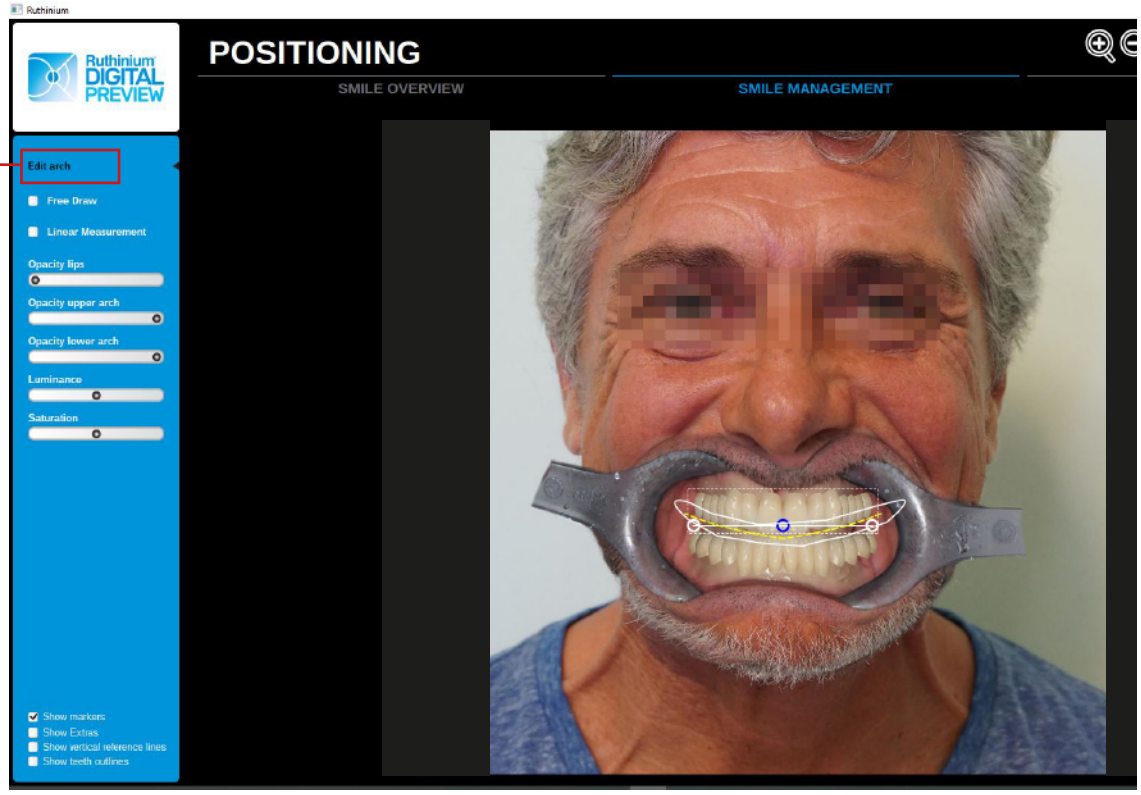
7° TEETH SETUP

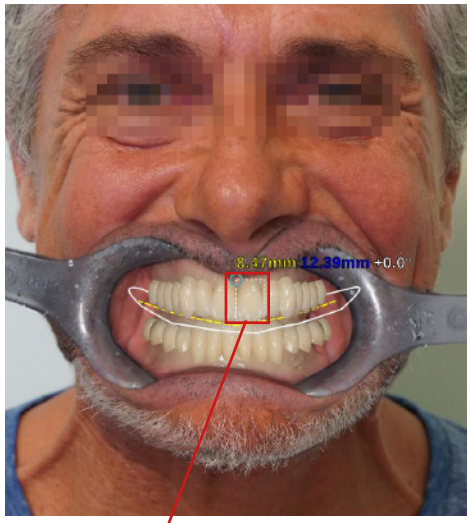
The software will automatically place images of the chosen teeth within the picture going to create an aesthetic assembly.

NB: The teeth are not in 3D STL format but have been photographed one by one and inserted within the software to create an aesthetic preview. Realistic fitting will have to be done with the 3D Denture Guide software.

Edit arch
By clicking on the **BLUE** circle in the center of the photo you can move the entire arch.

With the white lateral circles you always go to work on the entire arch changing the curvature of the posterior teeth





Clicking on the individual tooth, a **BLUE** dot will appear with which the tooth can be rotated and moved.

DIGITAL PREVIEW
Photographic previsualization software

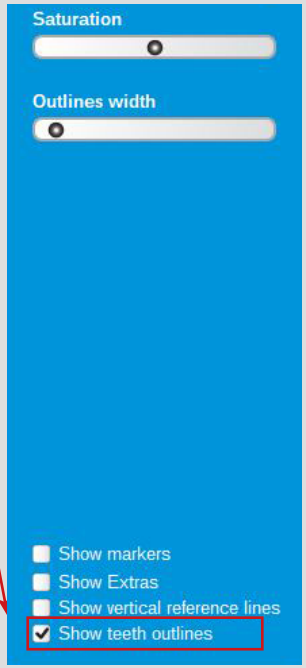
8° EXPORT OUTLINES

The outlines will later serve on the Denture Guide software as a reference in photographic aesthetic previsualization

HOW TO DO?

From the TEETH POSITIONING section, click on "**Show teeth outlines**". Red outlines will appear.

Export the file by clicking on the menu in the upper right corner "**Export current page**".



DIGITAL PREVIEW

Photographic previsualization software

9° AESTHETIC PREVISUALIZATION

Possibility to generate the project report in PDF format within will be present the complete analysis of the patient.

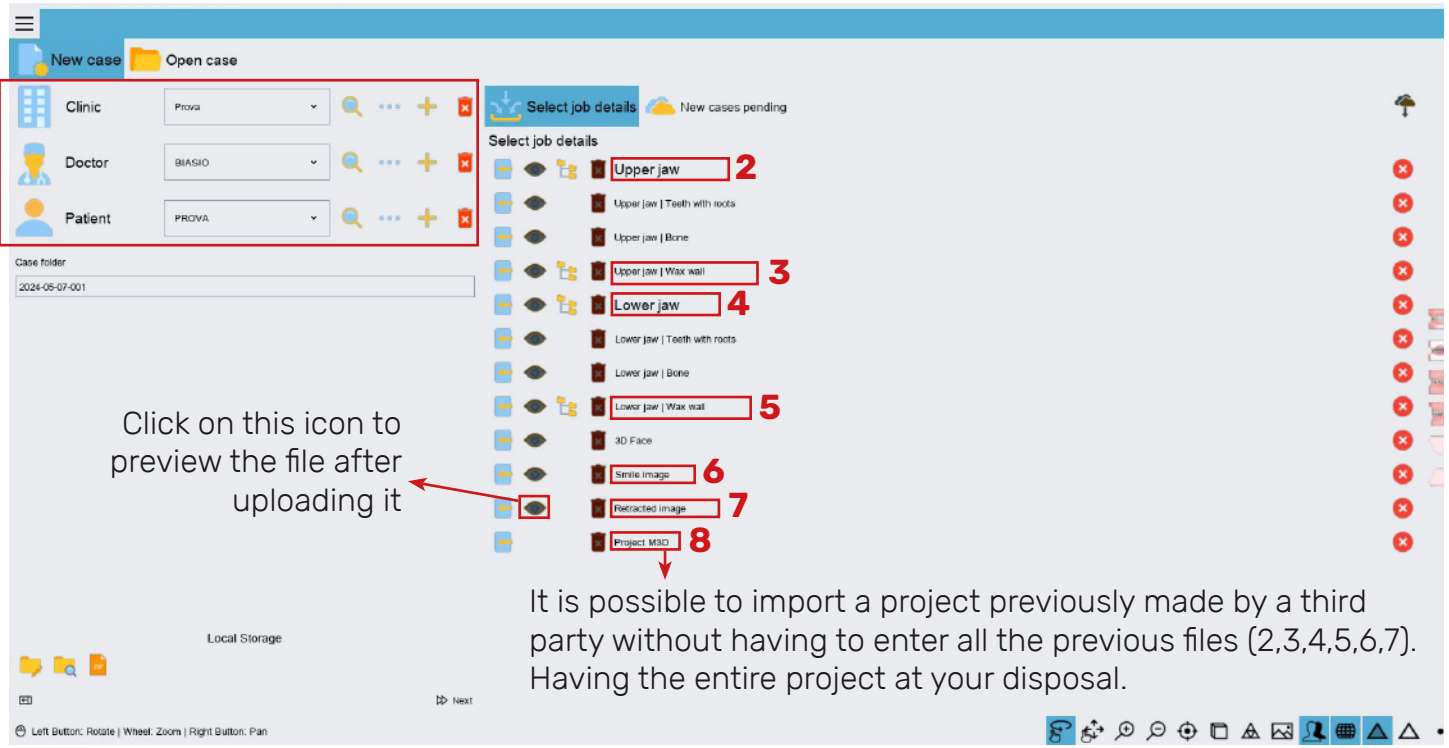
HOW TO DO?
Click on the menu in the upper right-hand corner, "**Generate report**"

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

1° IMPORTING STL FILES TO THE SOFTWARE

In this section, the dental technician can fill in by entering the data:
Clinic Name
Doctor Name
Patient Name



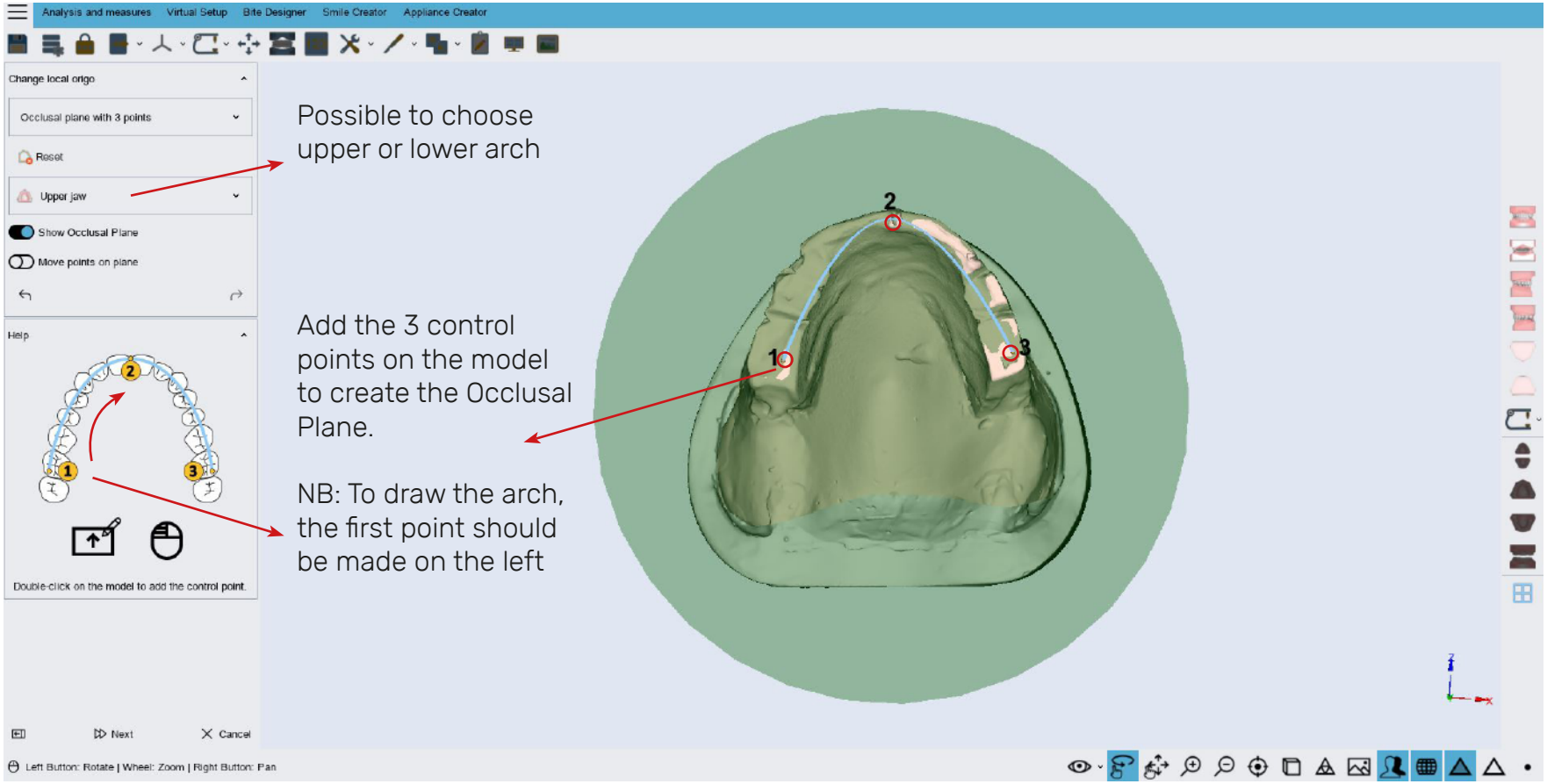
Click on this icon to preview the file after uploading it

It is possible to import a project previously made by a third party without having to enter all the previous files (2,3,4,5,6,7). Having the entire project at your disposal.

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

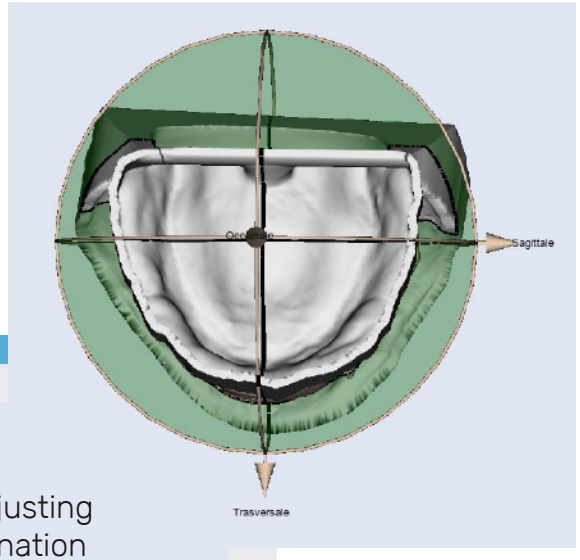
2° OCCLUSAL PLANE SETTING

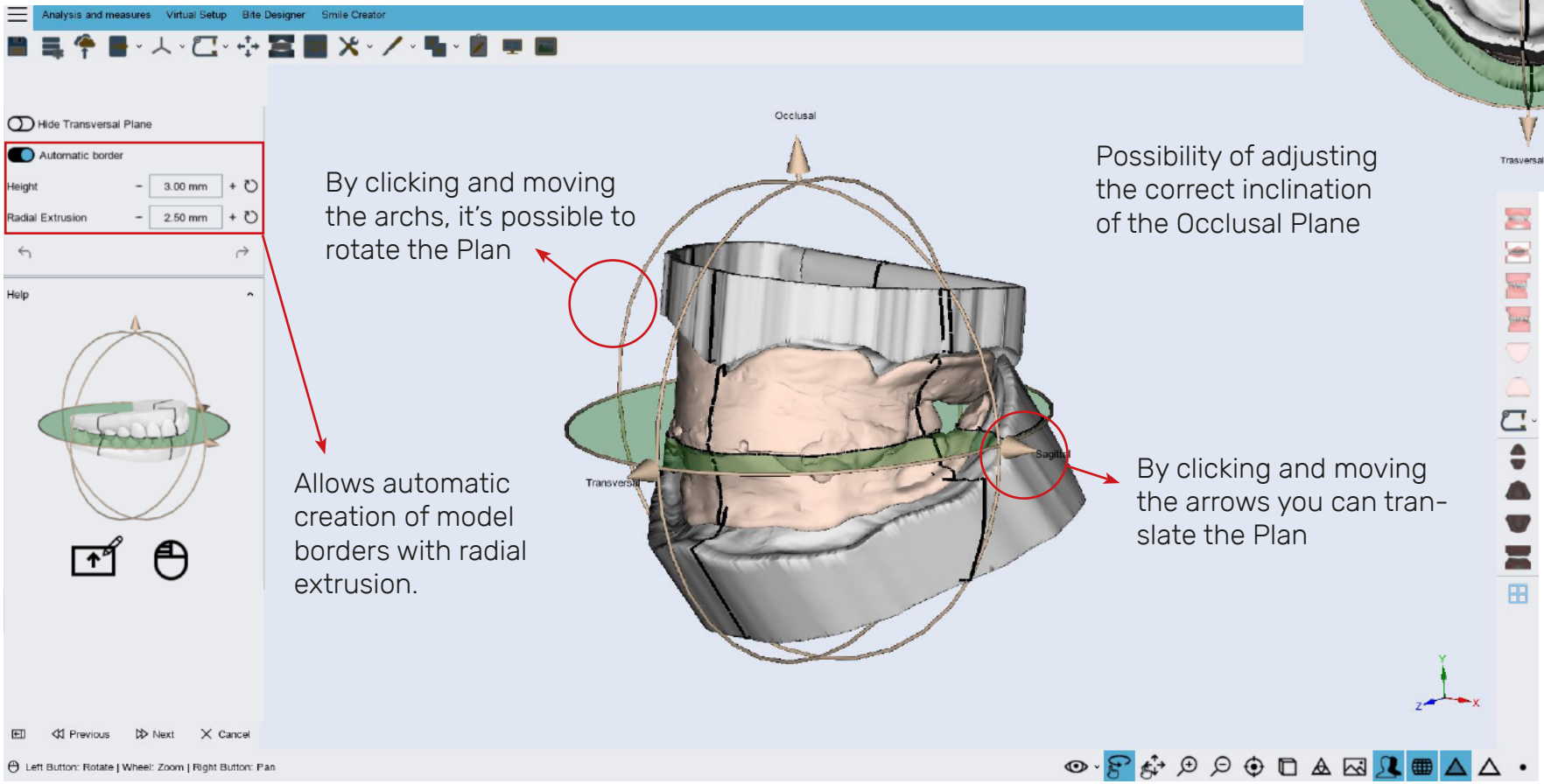


M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

2° OCCLUSAL PLANE SETTING





By clicking and moving the archs, it's possible to rotate the Plan

Possibility of adjusting the correct inclination of the Occlusal Plane

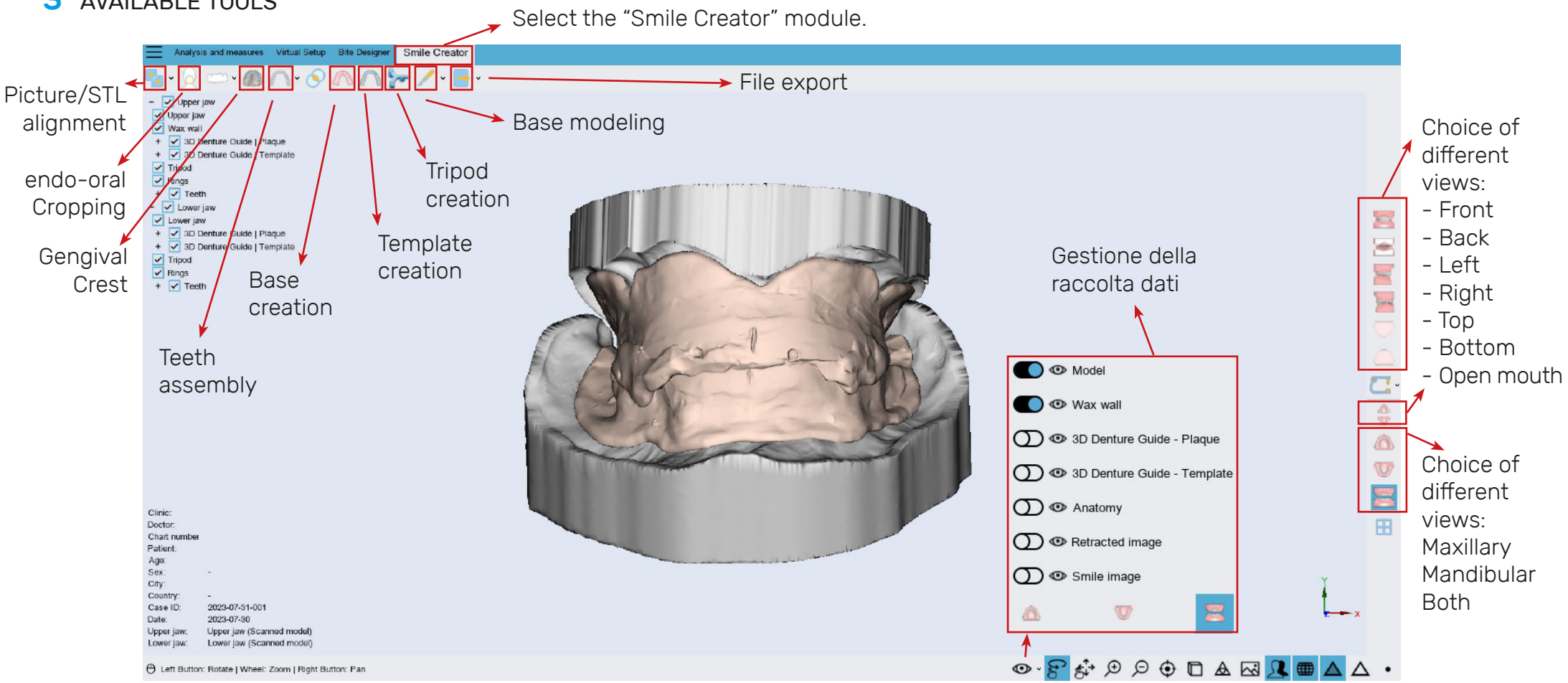
Allows automatic creation of model borders with radial extrusion.

By clicking and moving the arrows you can translate the Plan

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

3° AVAILABLE TOOLS

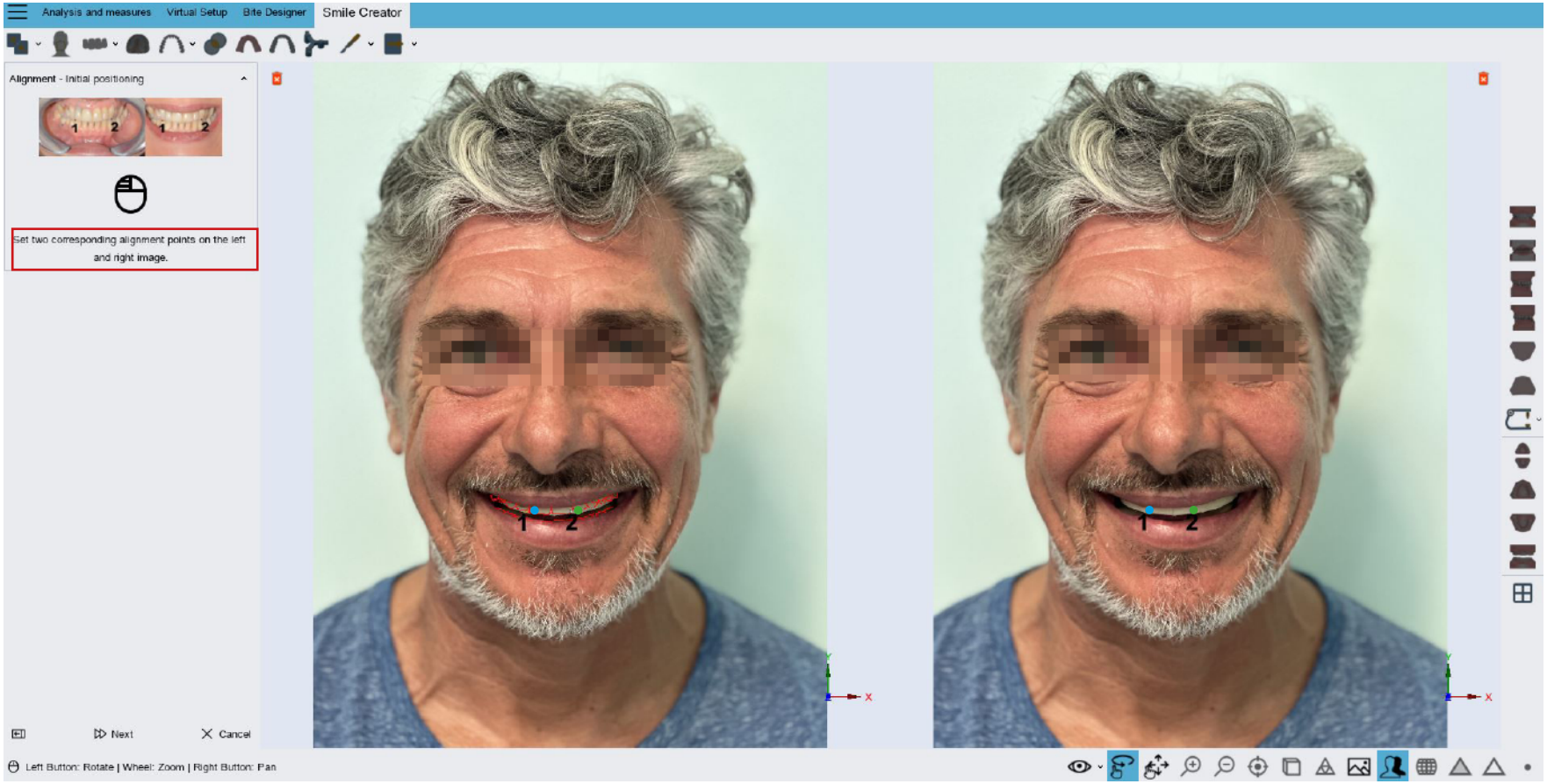


3D DENTURE GUIDE | M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

3° FILE ALIGNMENT WITH THE PICTURE

Through the two reference points incised by the clinician on the upper rims through the use of the calibrator.



3D DENTURE GUIDE | M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

3° FILE ALIGNMENT WITH THE PICTURE

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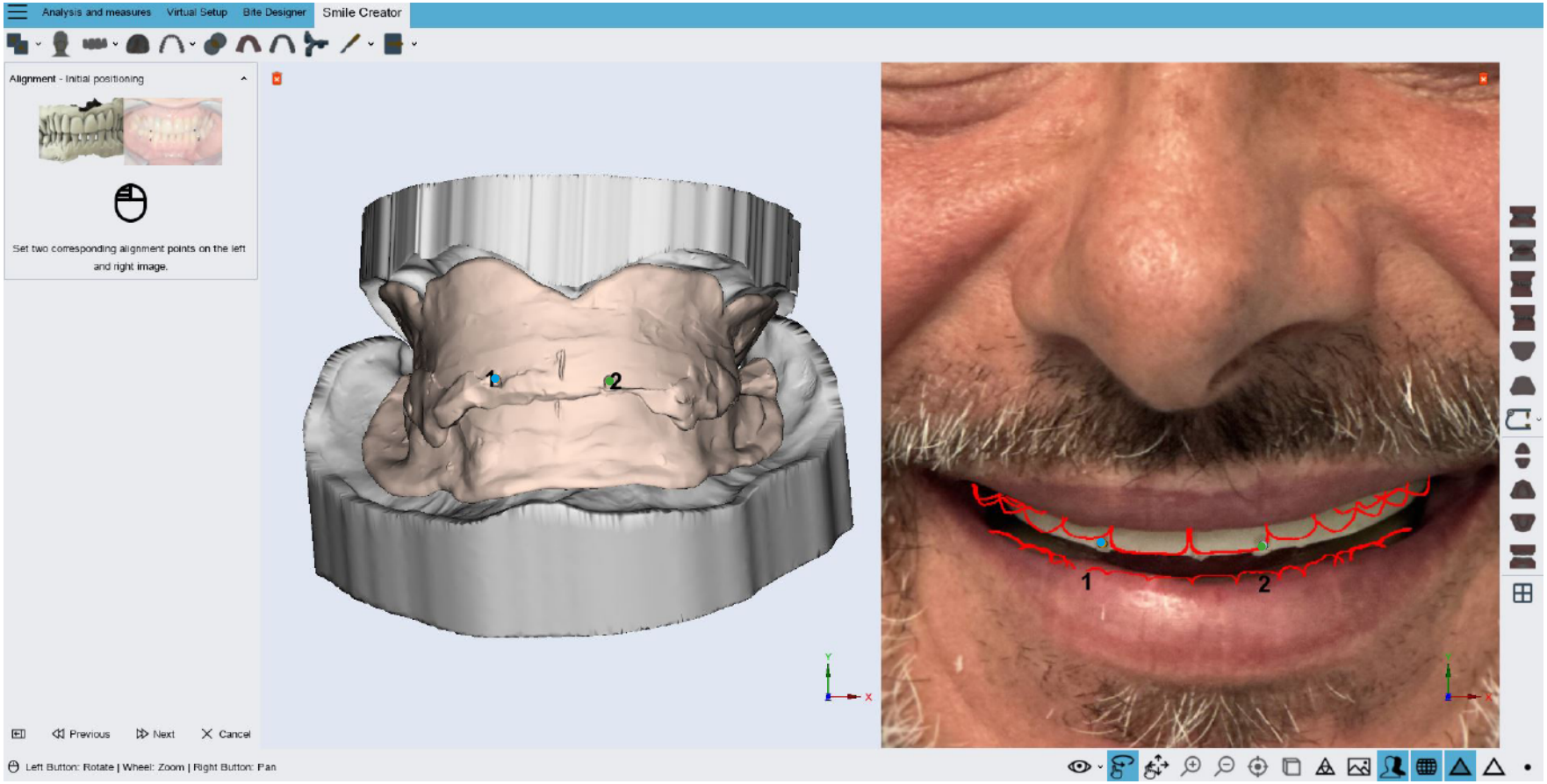

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

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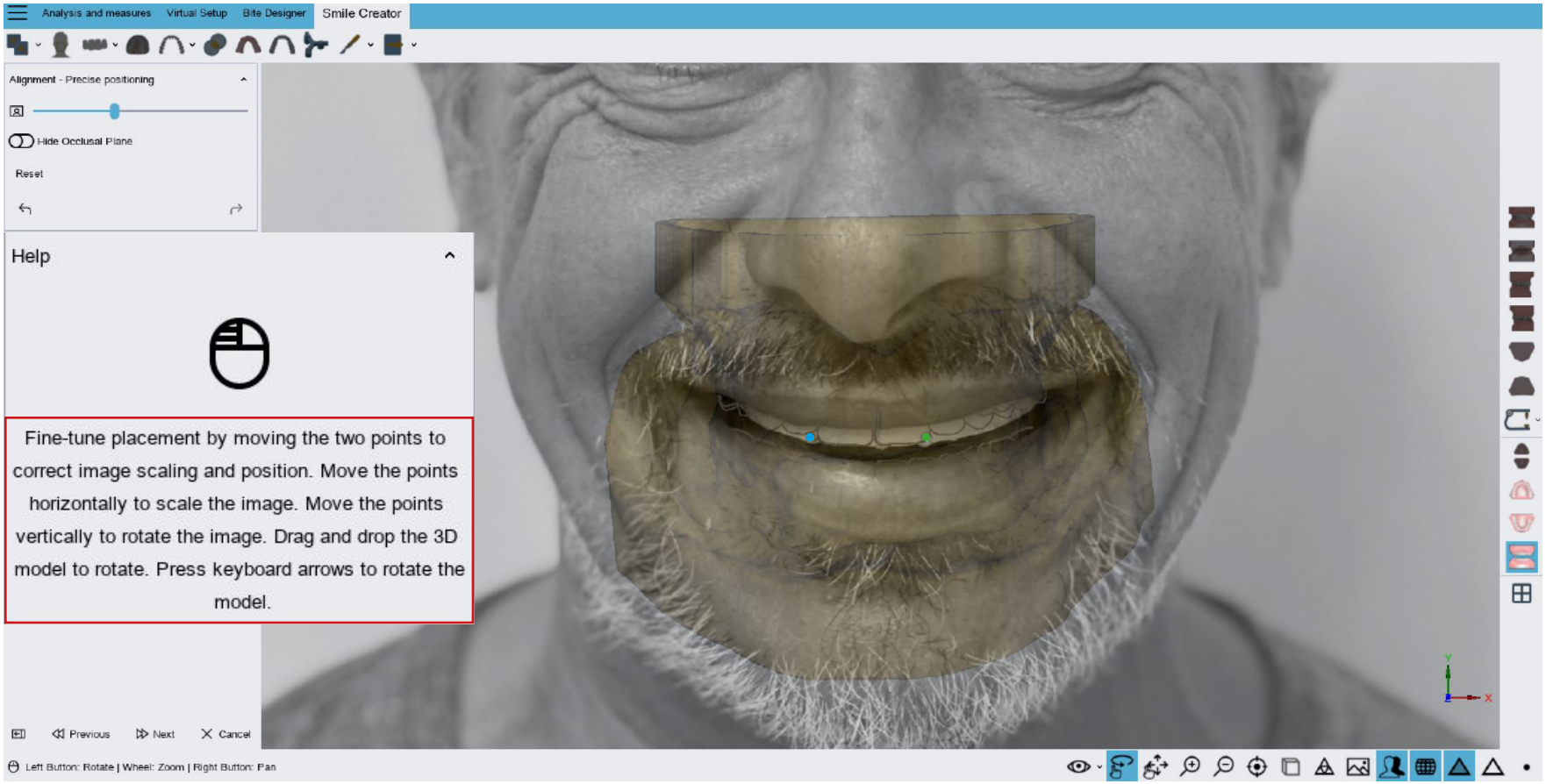
Through the two reference points incised by the clinician on the upper rims through the use of the calibrator.

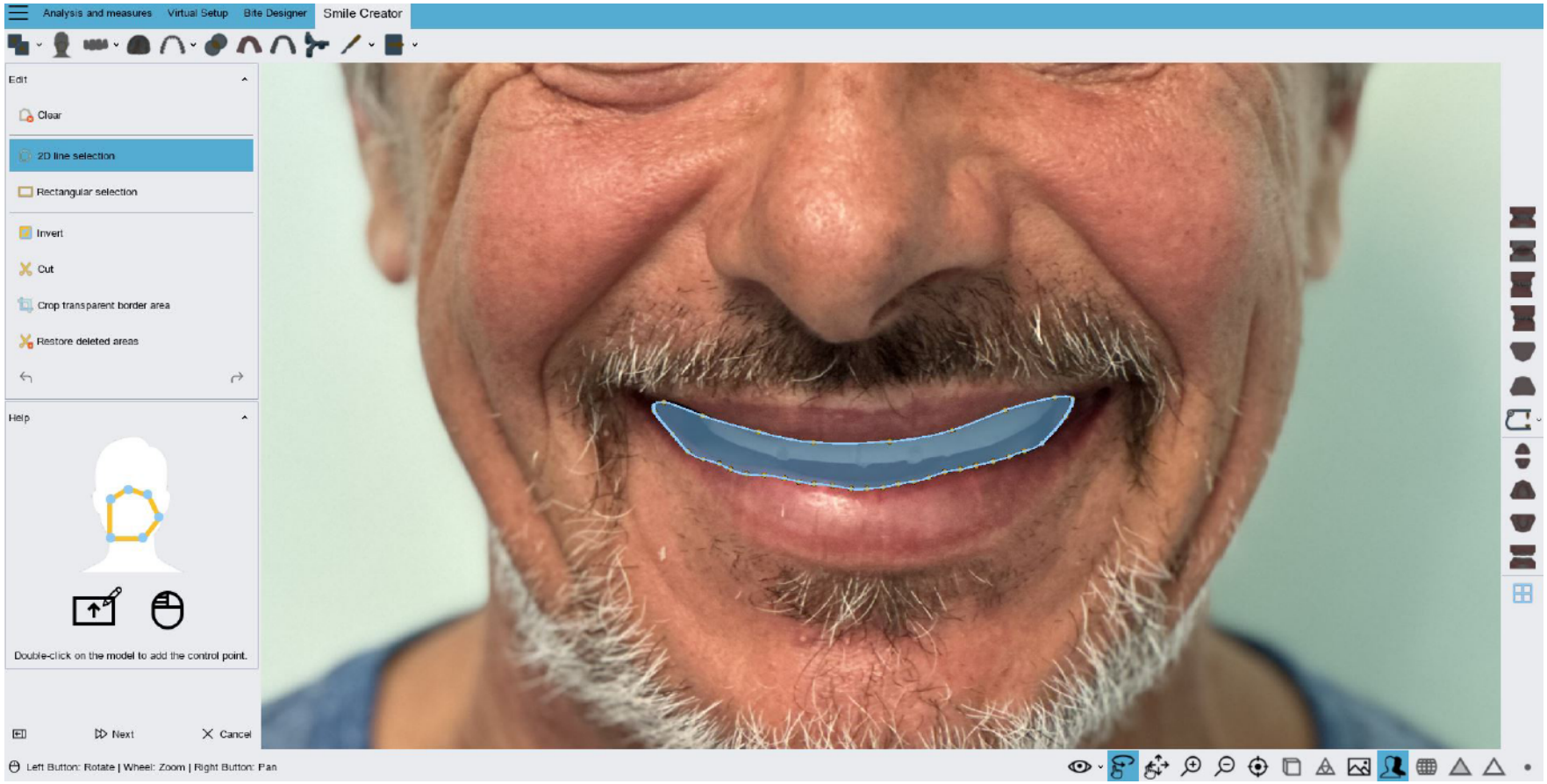


3D DENTURE GUIDE | M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

4° CROPPING PHOTO ENDO-ORAL AREA

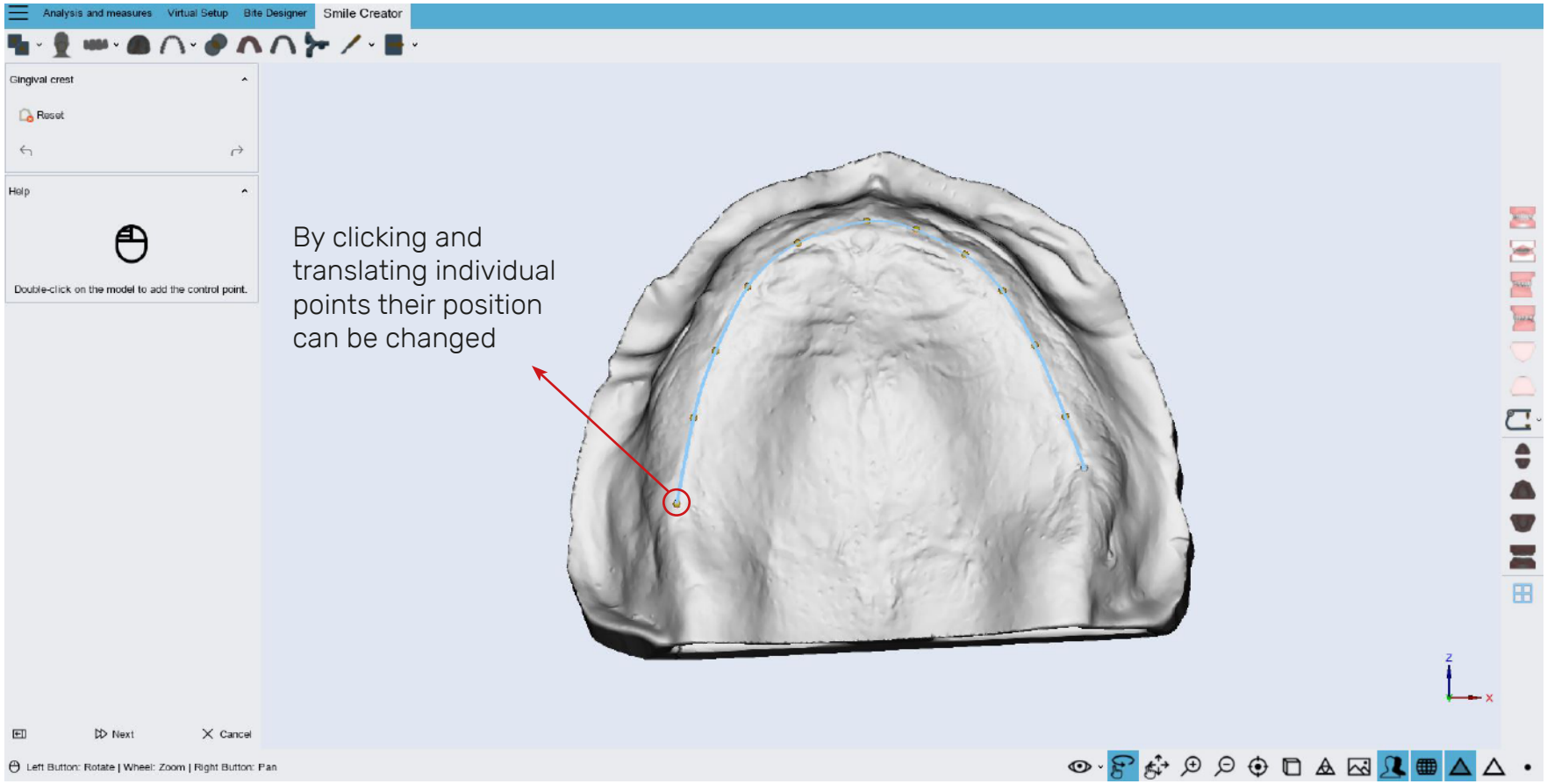
Double-clicking the mouse on the model to add control points.



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

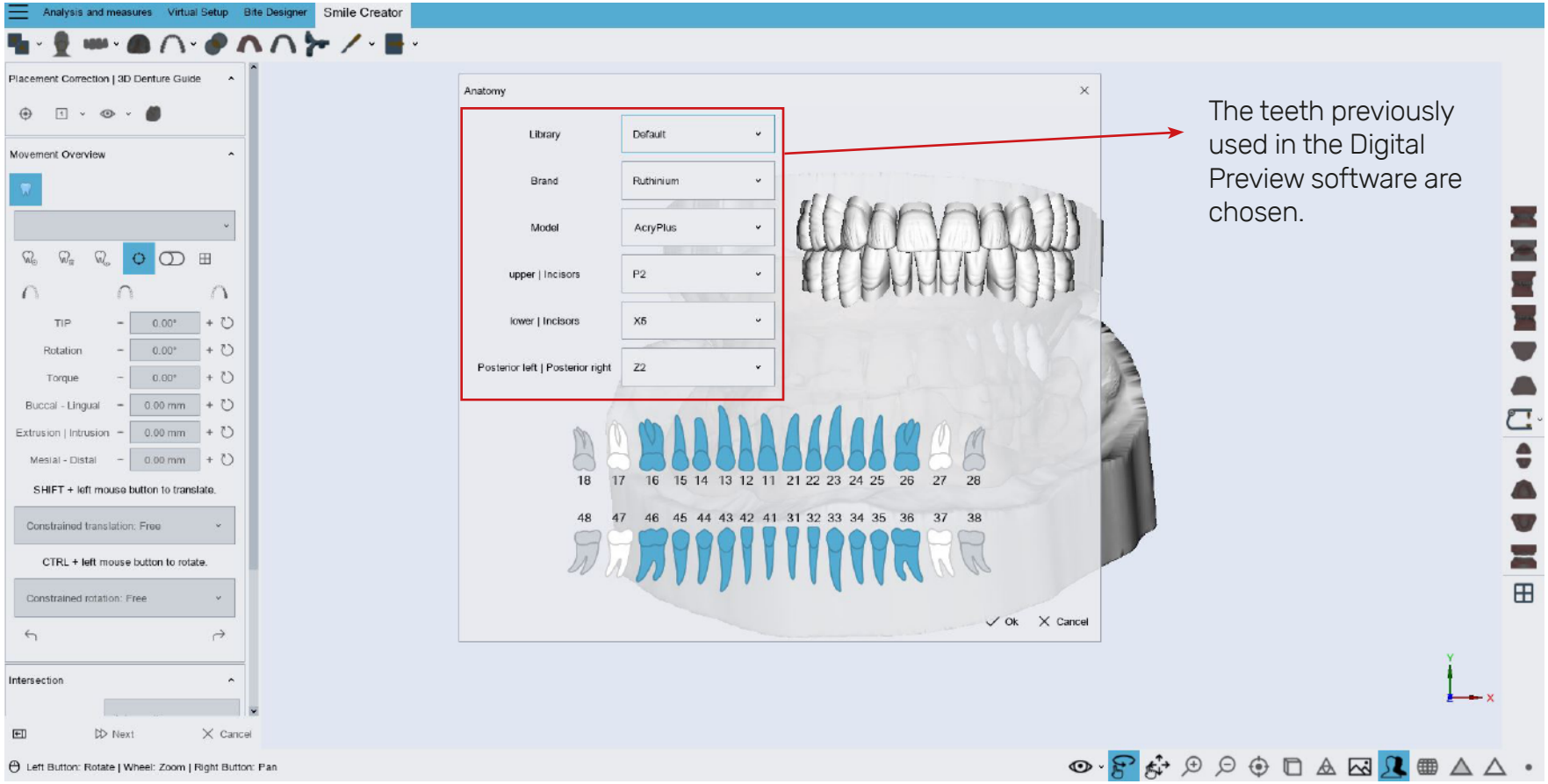
5° UPPER AND LOWER GENGIVAL CREST DESIGN



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

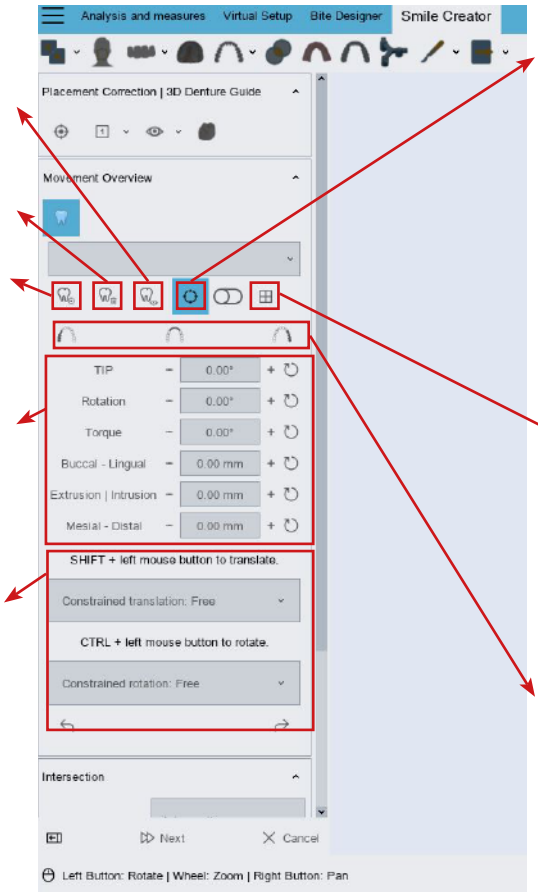
6° TEETH SETUP



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

6° TOOLS AVAILABLE FOR TOOTH ASSEMBLY



Show/hide tooth

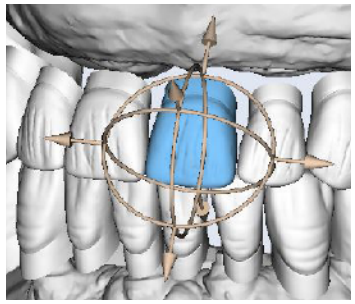
Remove tooth

Reset tooth position

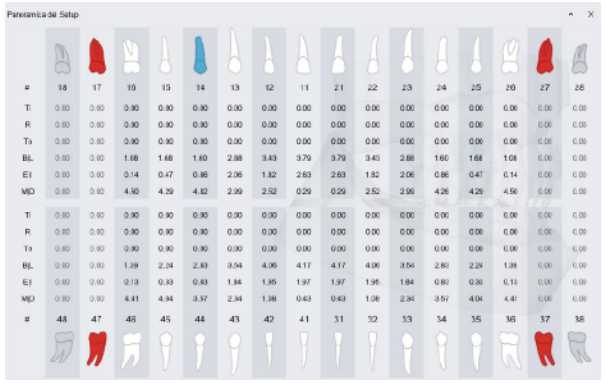
The grid with parameters allows for micro movements on tooth placement

Allows the tooth or groups of teeth to be translated or rotated by constraining them in one direction or plane

Show/Hide manipulator



Tooth-by-tooth setup overview



Group selectors for simultaneous tooth shifting

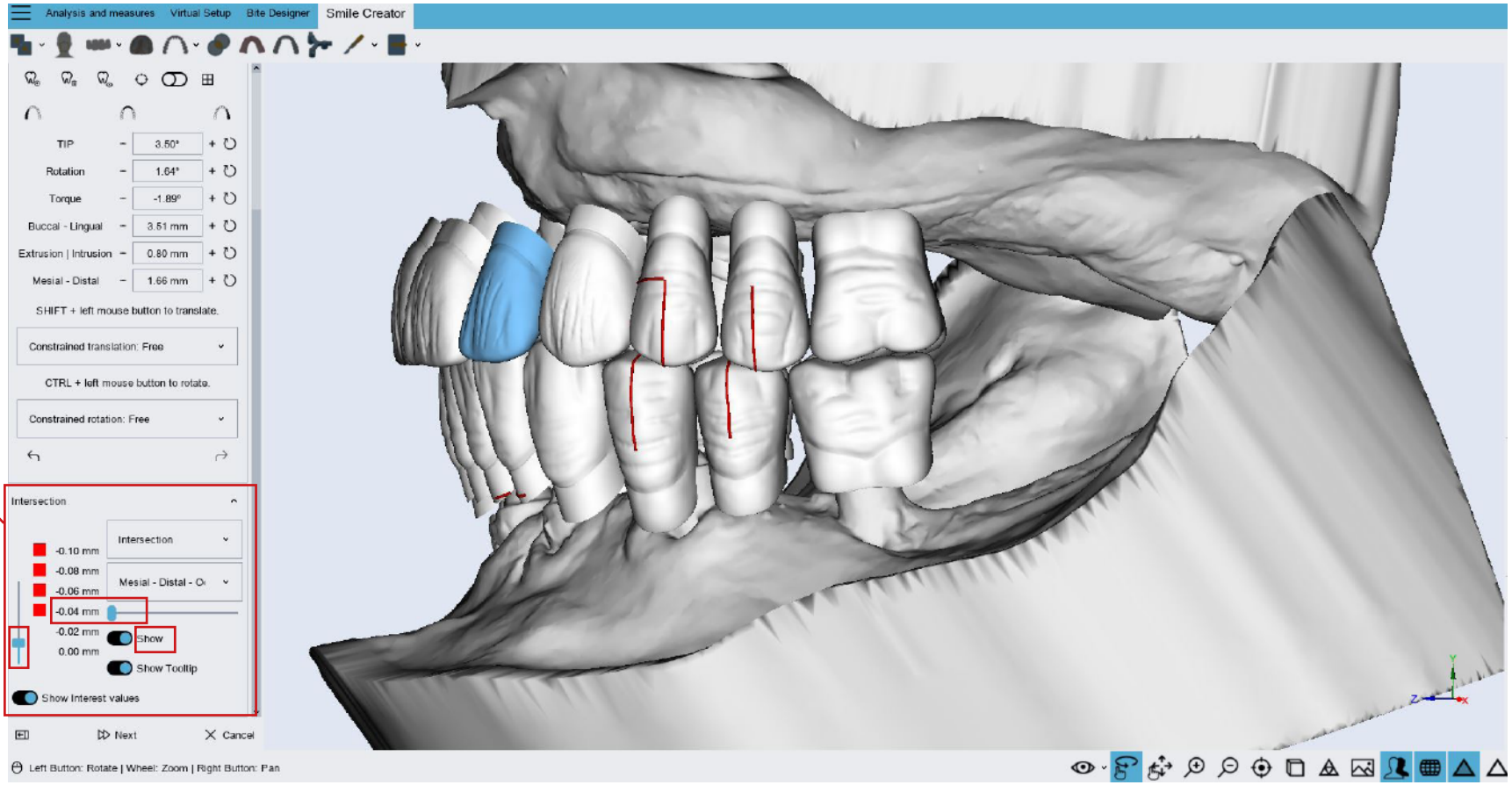
3D DENTURE GUIDE

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

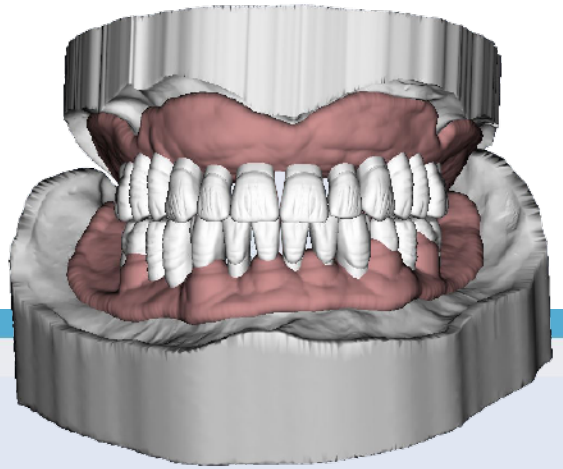
6° TOOLS AVAILABLE FOR TOOTH ASSEMBLY

In this area you can view any intersections between the teeth



M3D STUDIO - DENTURE GUIDE MODULE

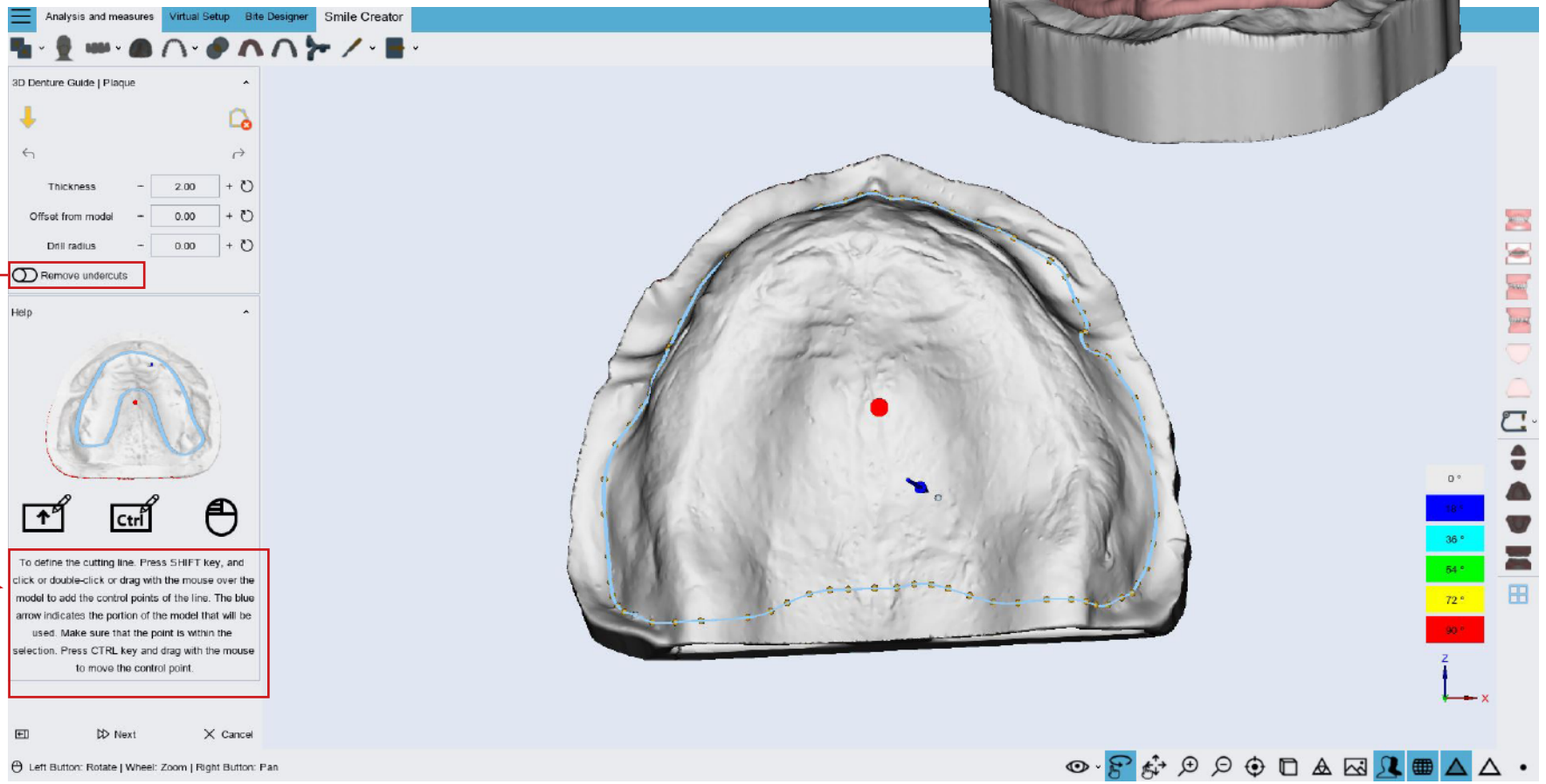
Digital setup software



7° DRAWING OF THE BASE

Activating this function allows to create the base by removing undercuts

How to draw the base?

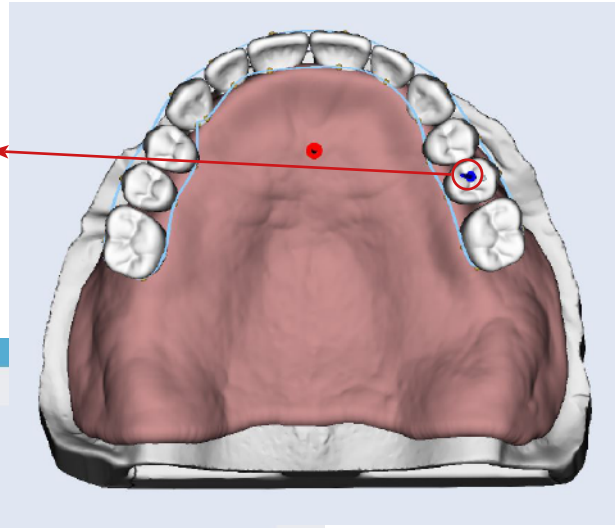


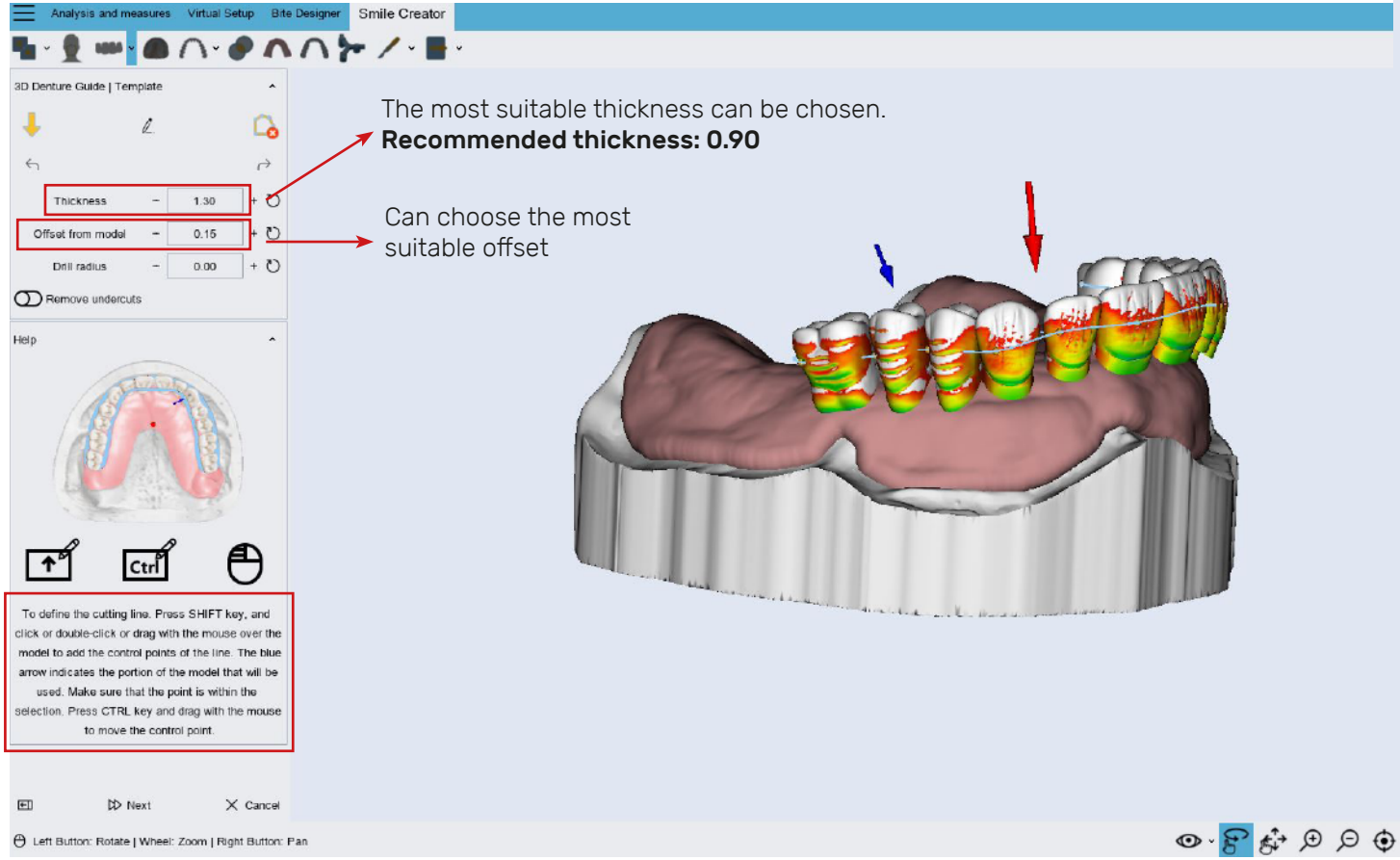
M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

8° REALIZATION THROUGH TEMPLATE POINTS (GUIDE THAT ALLOWS TOOTH PLACEMENT)

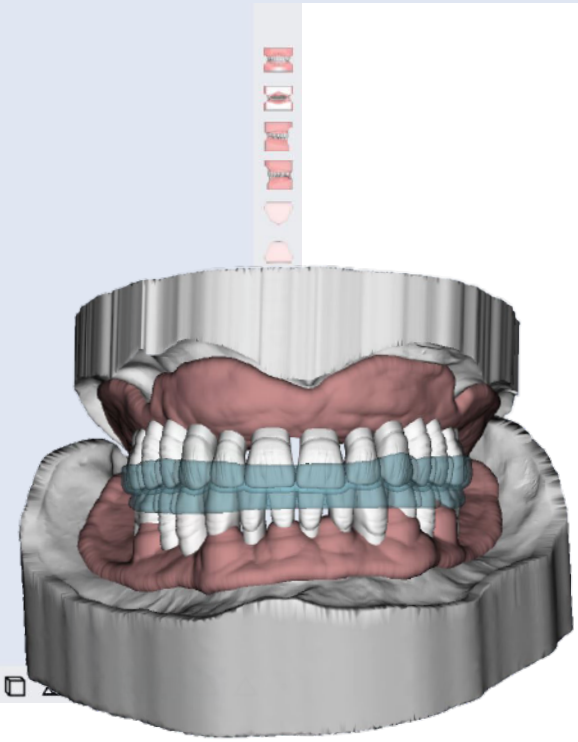
NB: important to place the blue arrow in the occlusal part of the tooth to allow the software to correctly place the template





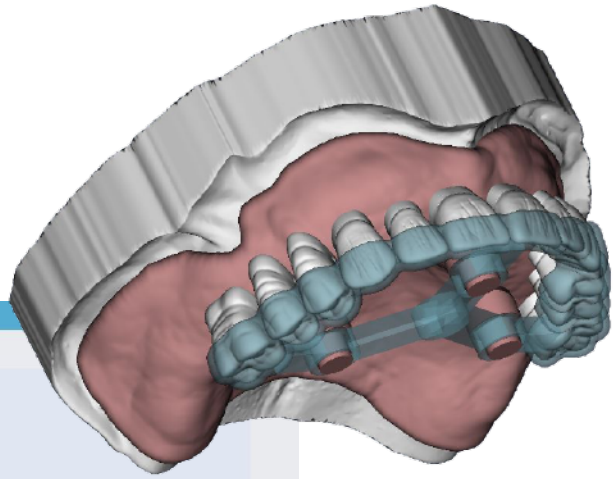
The most suitable thickness can be chosen.
Recommended thickness: 0.90

Can choose the most suitable offset

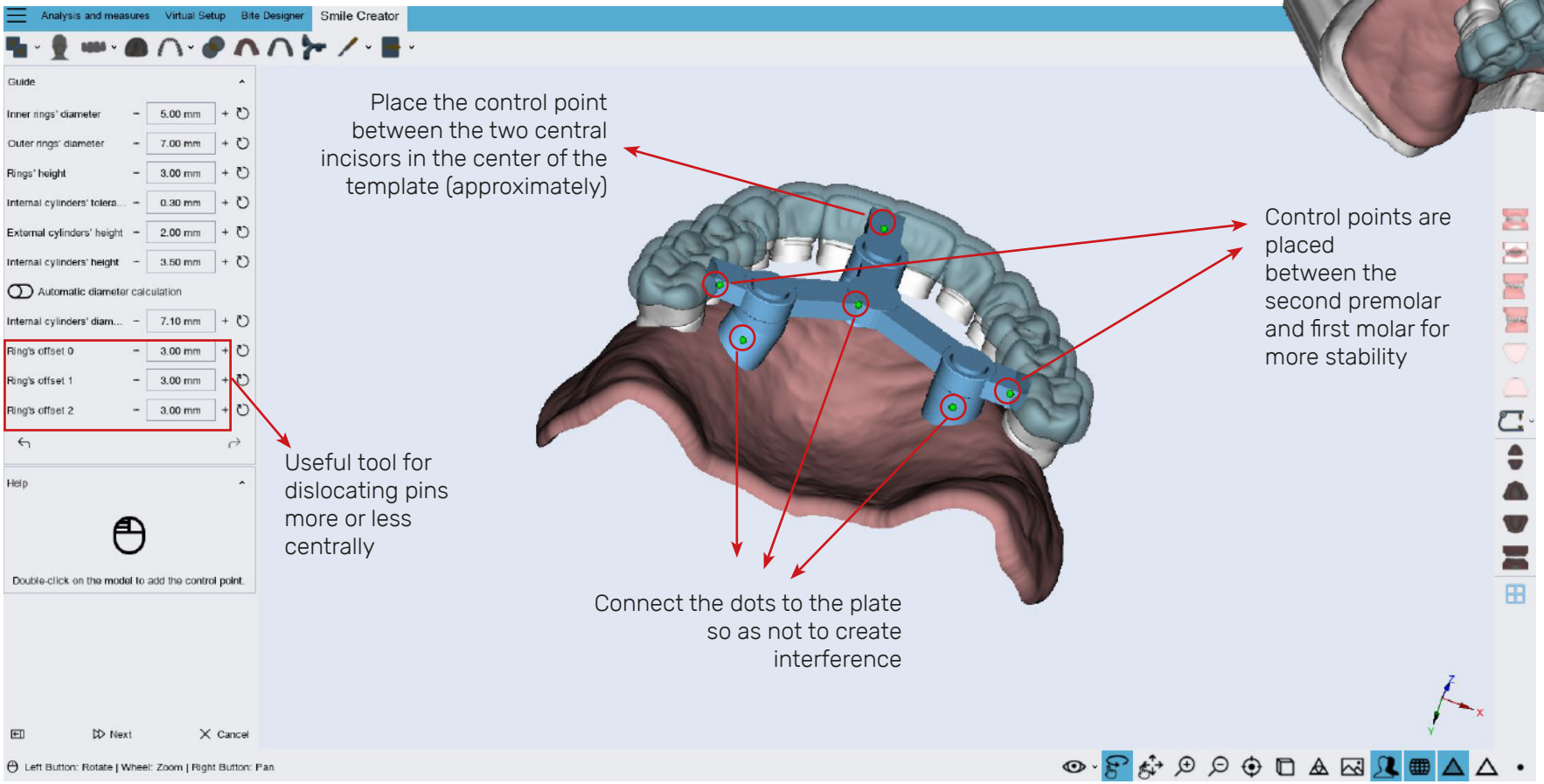


3D DENTURE GUIDE | M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software



9° CREATION OF THE TRIPOD (BASE-TEMPLATE LINK)



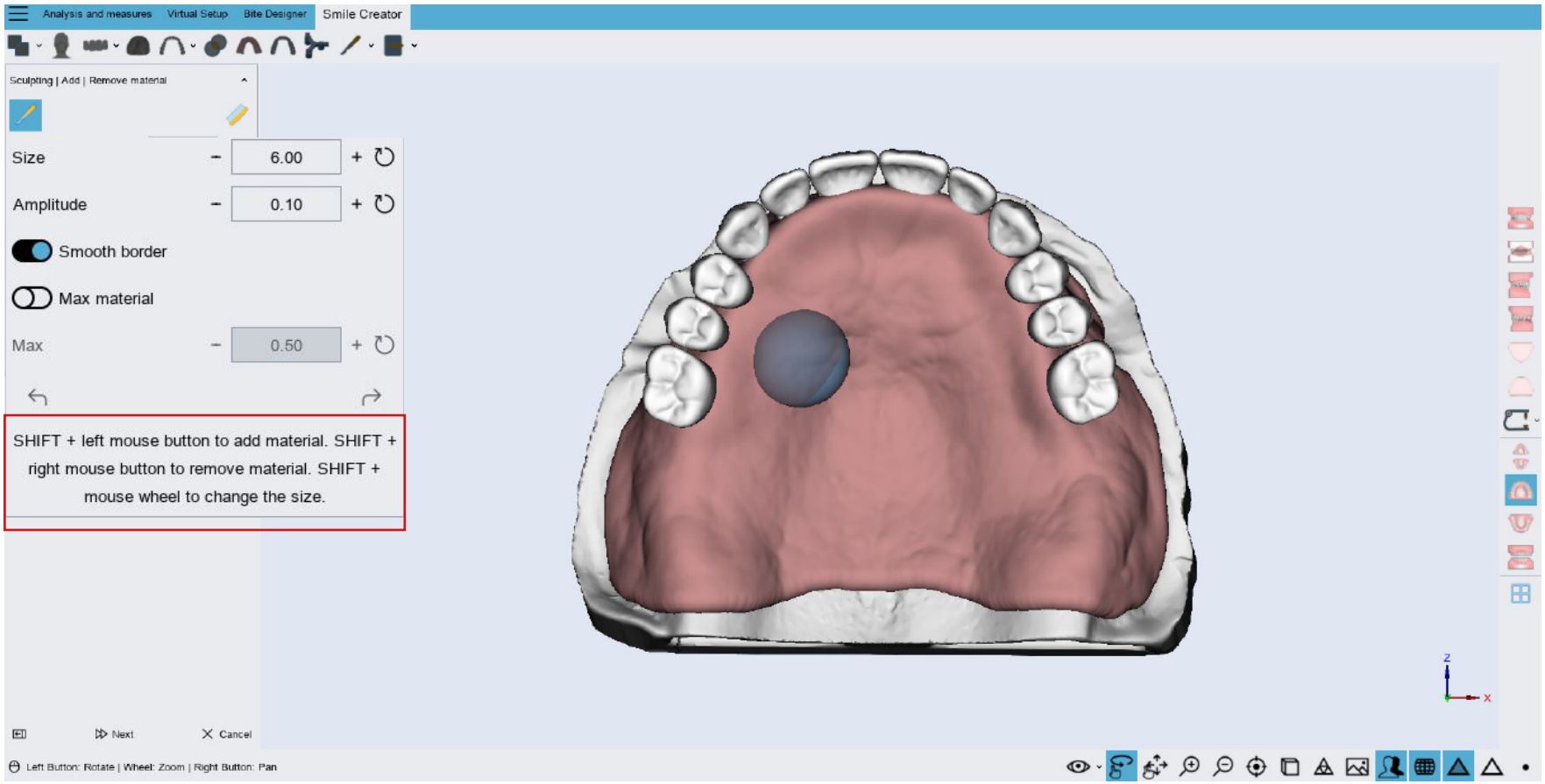
WITH THE USE OF
ACRY SMART AND **ACRY PLUS**
WE RECOMMEND THE FOLLOWING STEPS:

BASE MODELING AND
EXPORTING STL FILES

M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

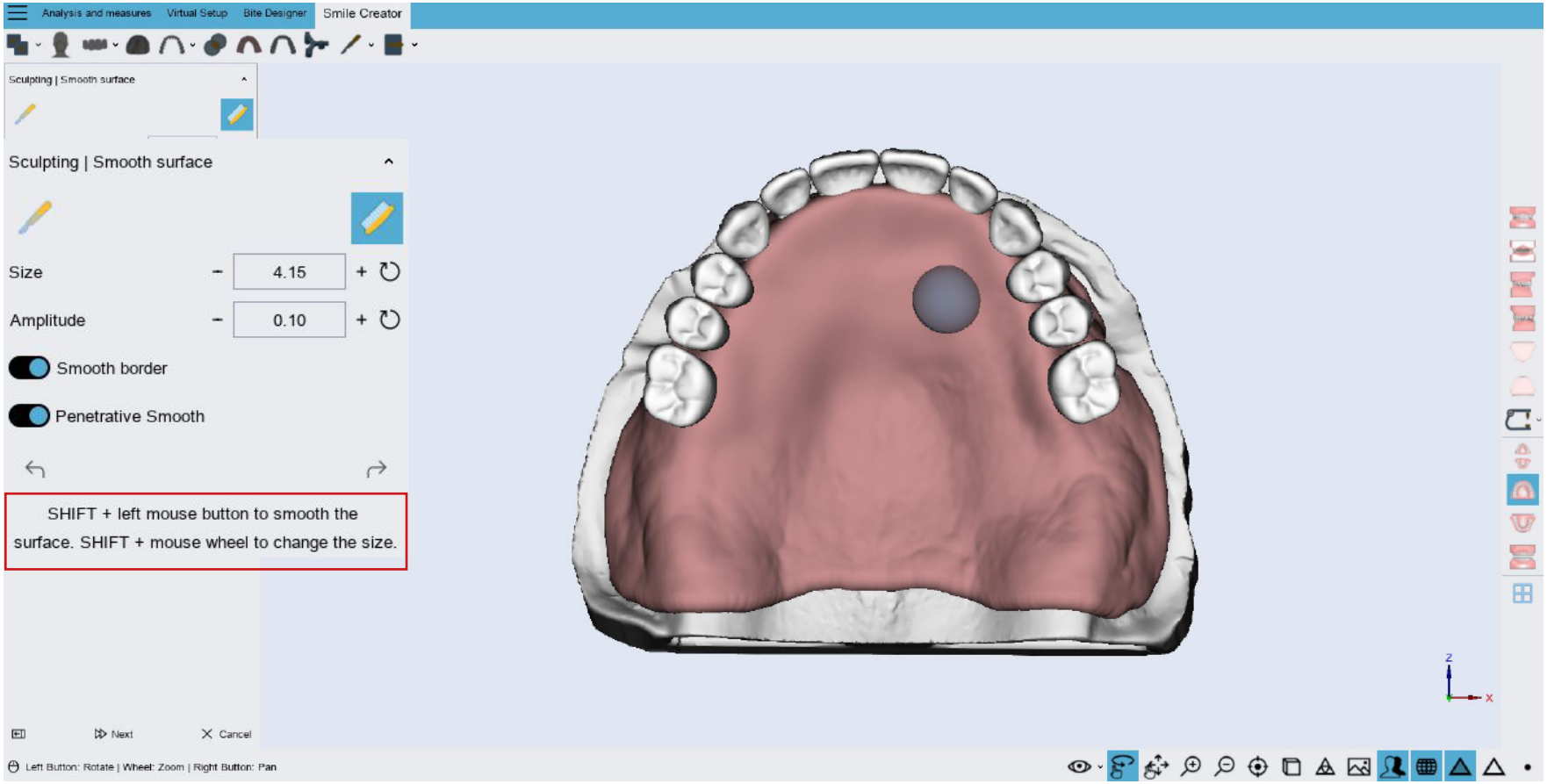
10° BASE MODELLING UP TO THE NECK OF THE TOOTH TO AVOID UNDERCUTS.



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

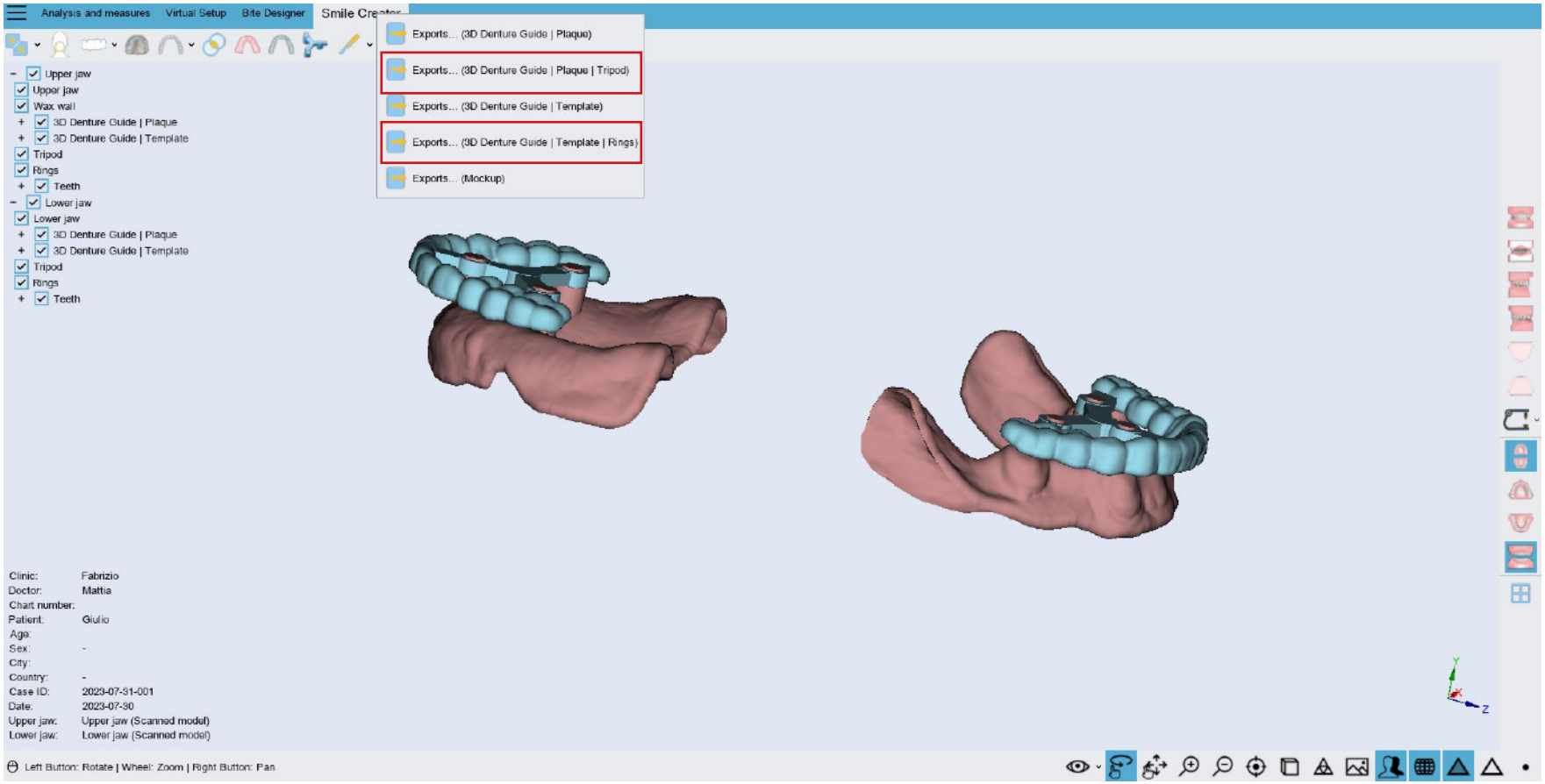
10° BASE MODELING (SMOOTHING THE SURFACE)



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

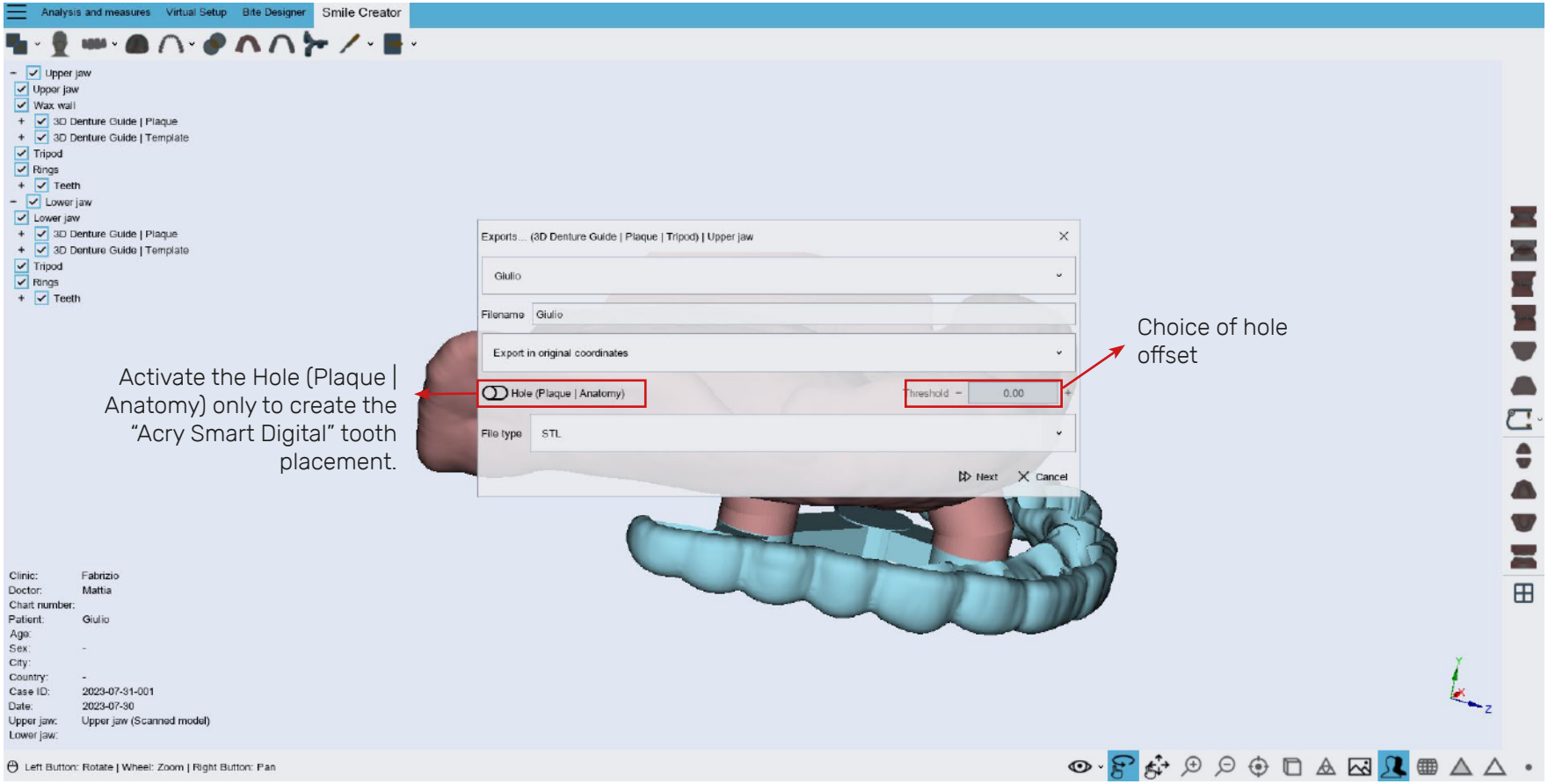
11° FILE EXPORT



M3D STUDIO - DENTURE GUIDE MODULE

Digital setup software

11° EXPORT OF THE BASE WITH A HOLE. USEFUL WHEN THE TRIPOD TOUCHES THE TOOTH OR TO DRILL THE BASE NEAR THE NECK



WITH THE USE OF
ACRY SMART DIGITAL
WE RECOMMEND THE FOLLOWING STEPS:

GUM MODELING AND
EXPORTING STL FILES

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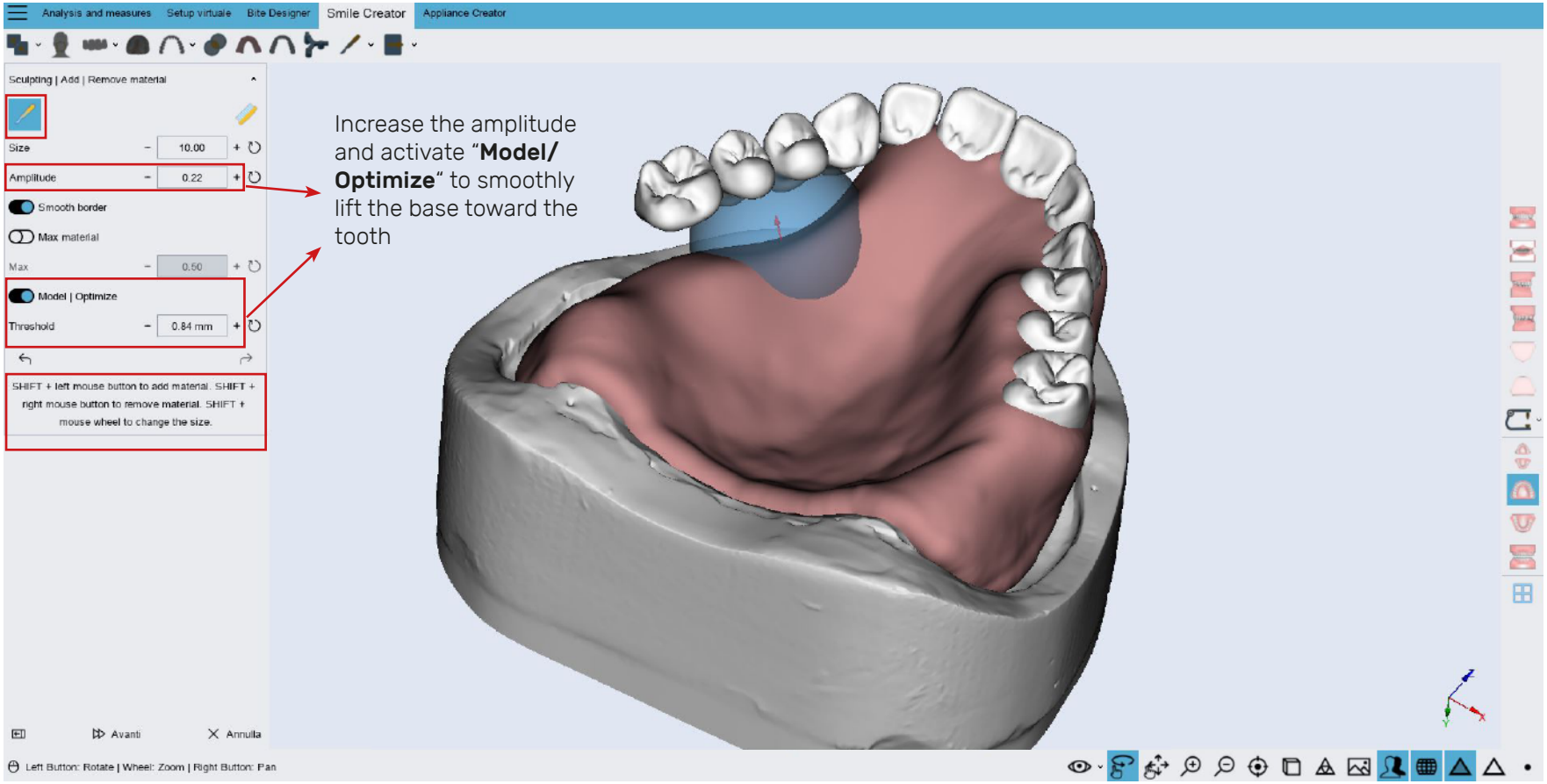
Digital setup software

10° GUM / GINGIVA DESIGN



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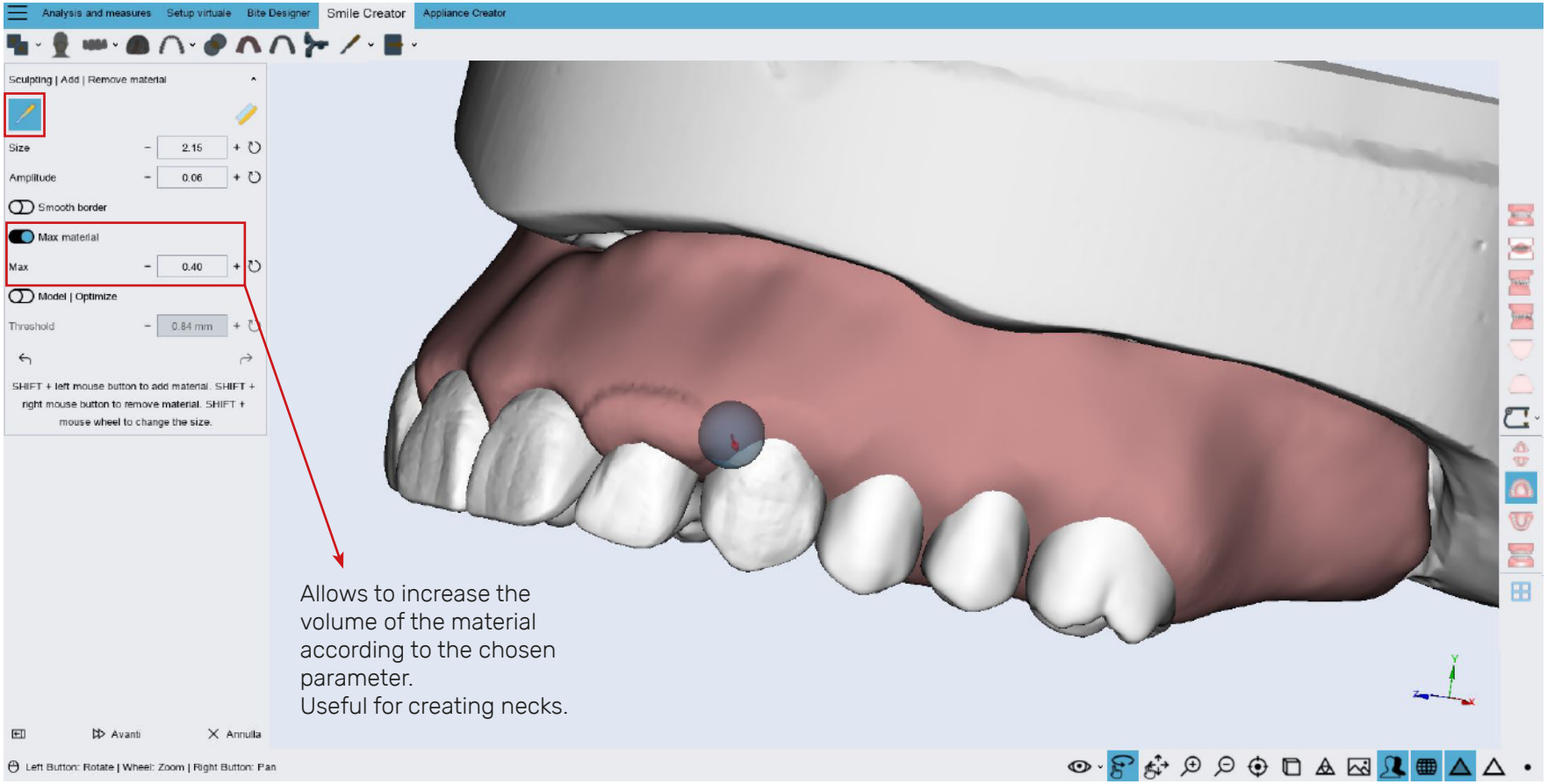
11° GUM / GINGIVA DESIGN



Allows to increase the volume of the material according to the chosen parameter.
Useful for creating necks.

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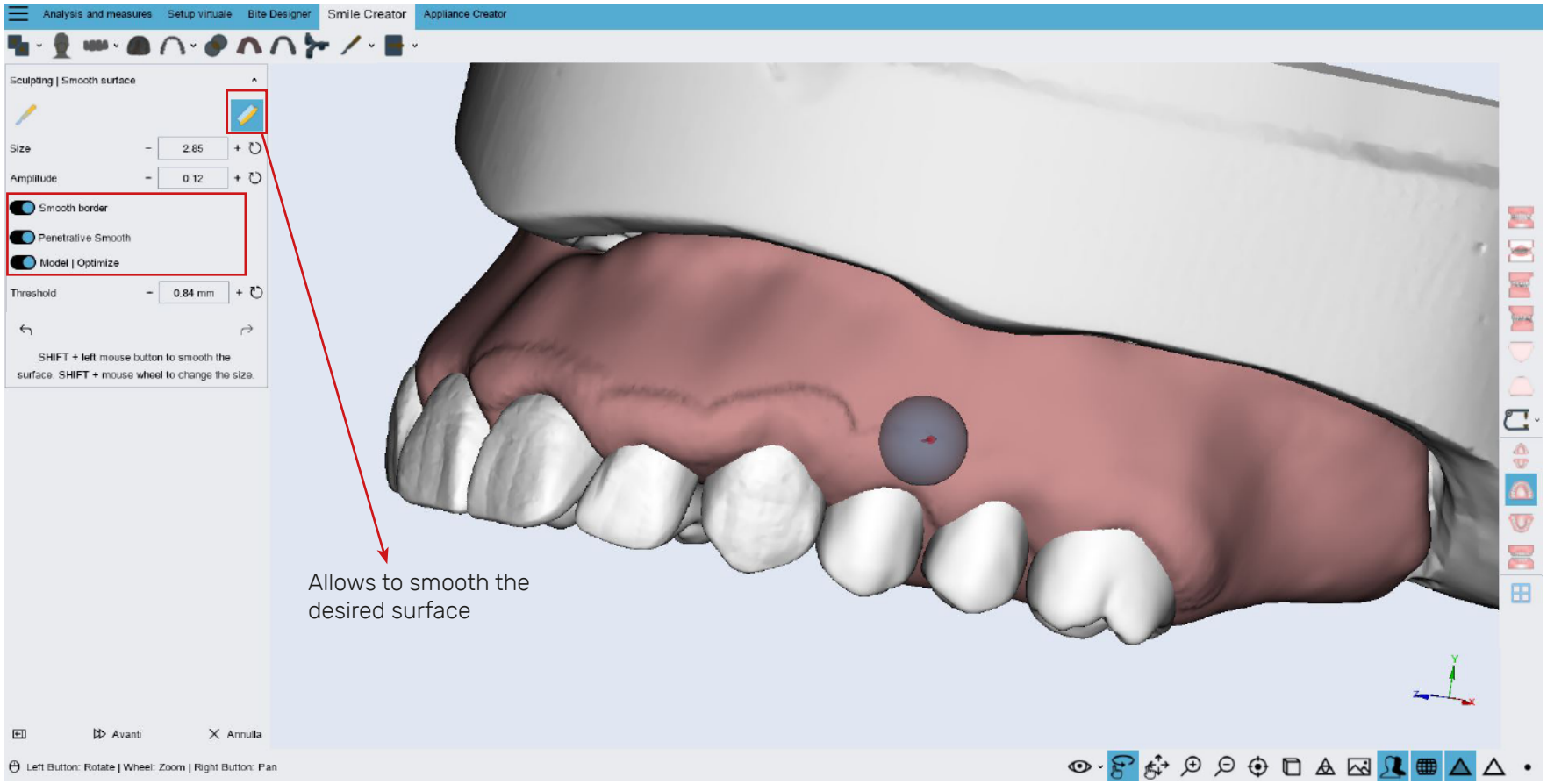
11° GUM / GINGIVA DESIGN



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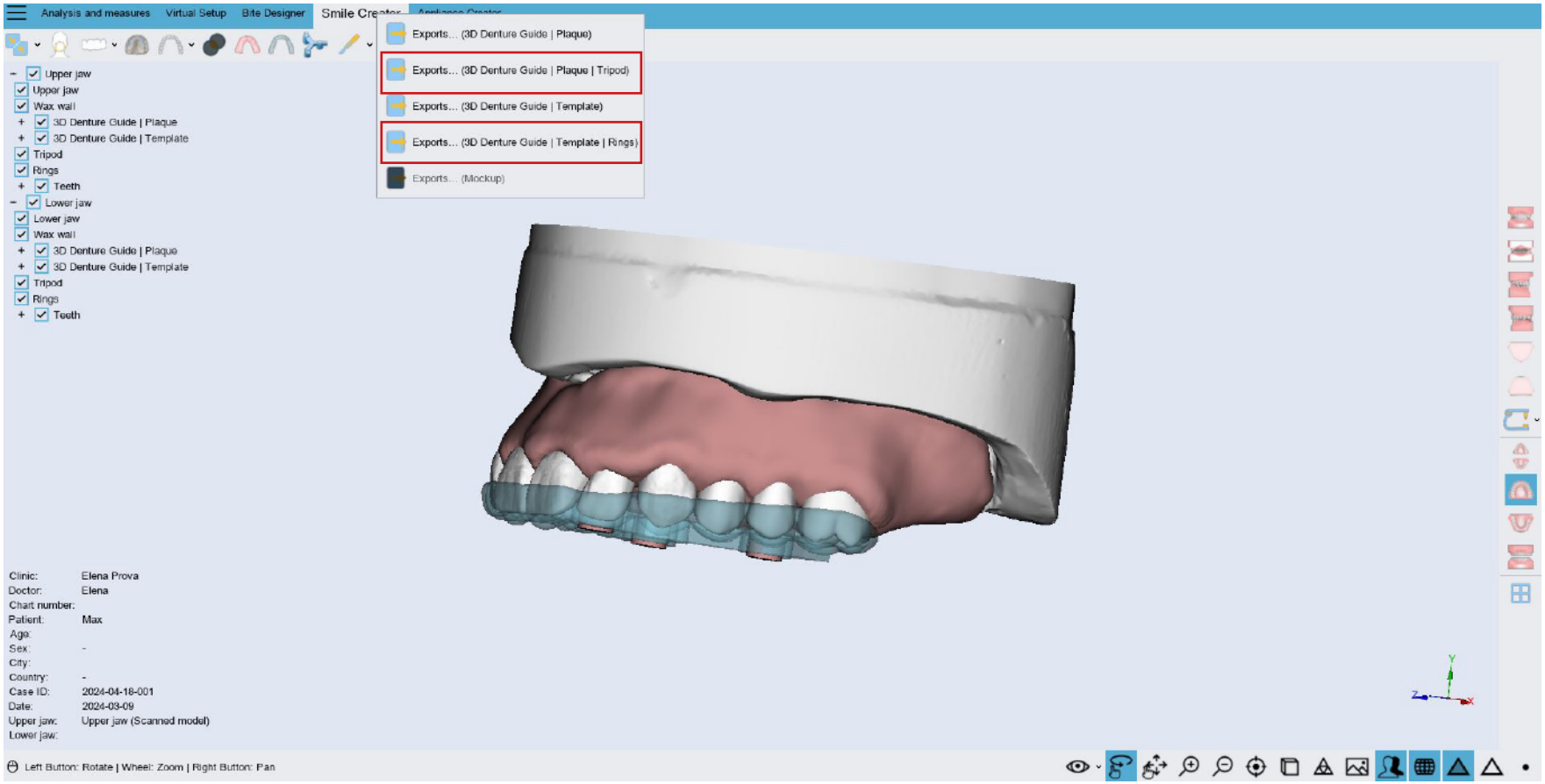
12° FILE EXPORT



M3D STUDIO - DENTURE GUIDE MODULE

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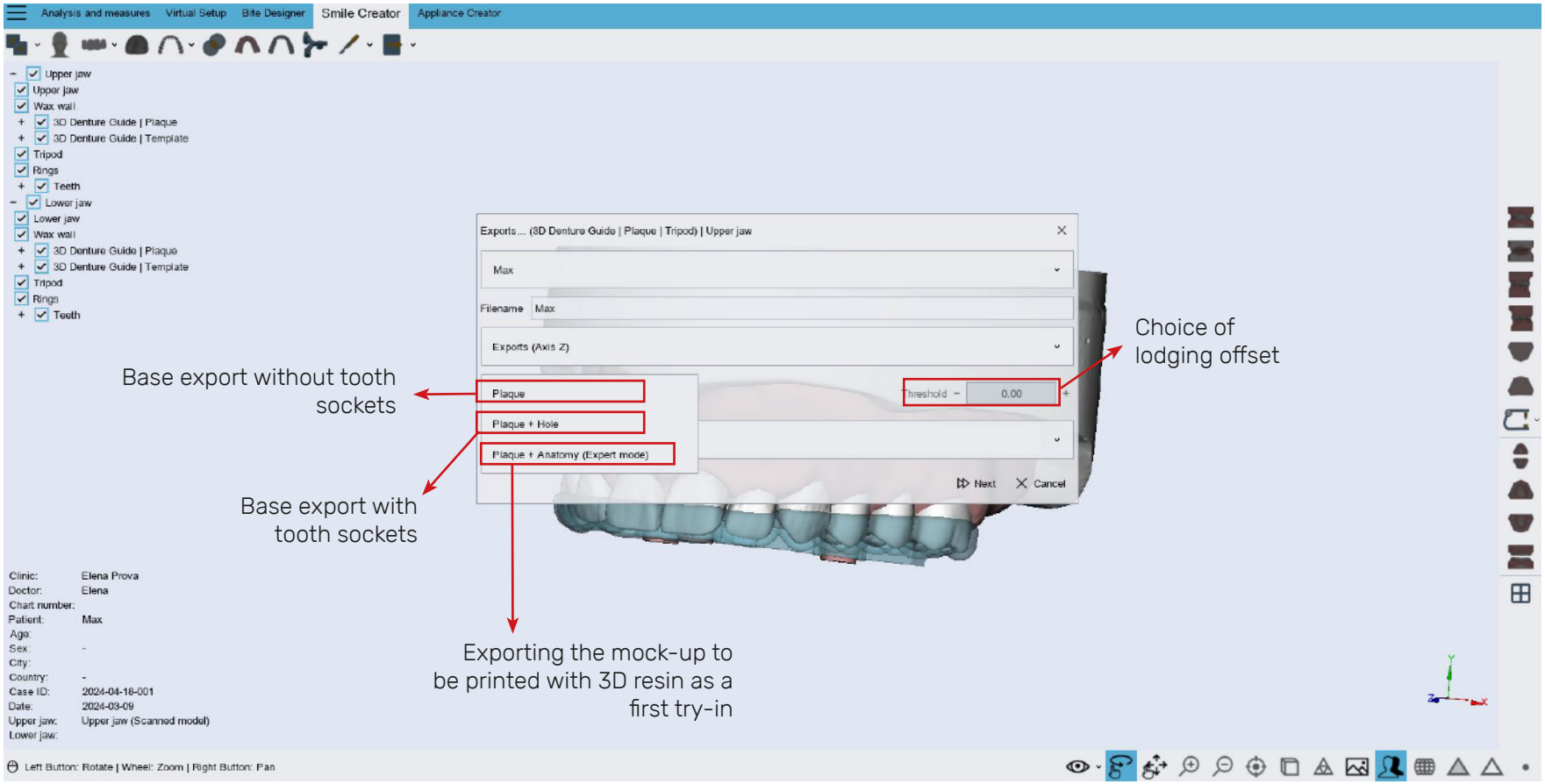
12° BASE EXPORT WITH TOOTH LODGING



Scan the QR Code
and learn more about the Denture Guide

Ap. 2025.03-rev.01

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